

small air forces observer

vol. 25 no. 3 (99)
October 2001

US \$5.00



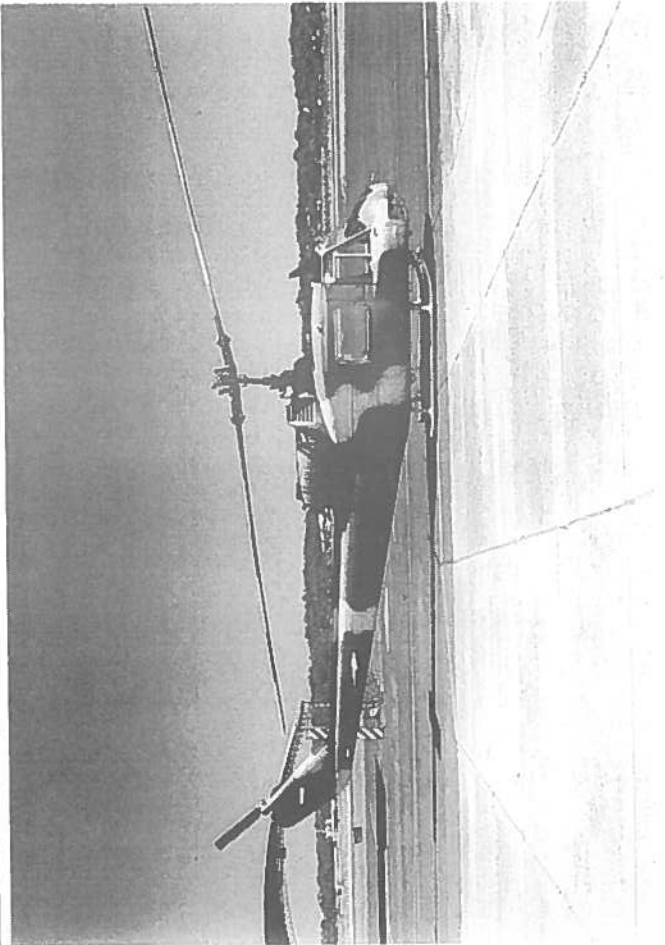
A Mexican Pilot in the Philippines
Cuban and Dominican Republic PT-17
South African Aviation Corps
Ecuadorian Army Piper PA-18
Beriev MBR-2 Flying Boat
Piaggio P-166 Albatross
Yugoslavia's First Jet
Paraguayan Hueys

vol. 25 no. 3 (99)

October 2001



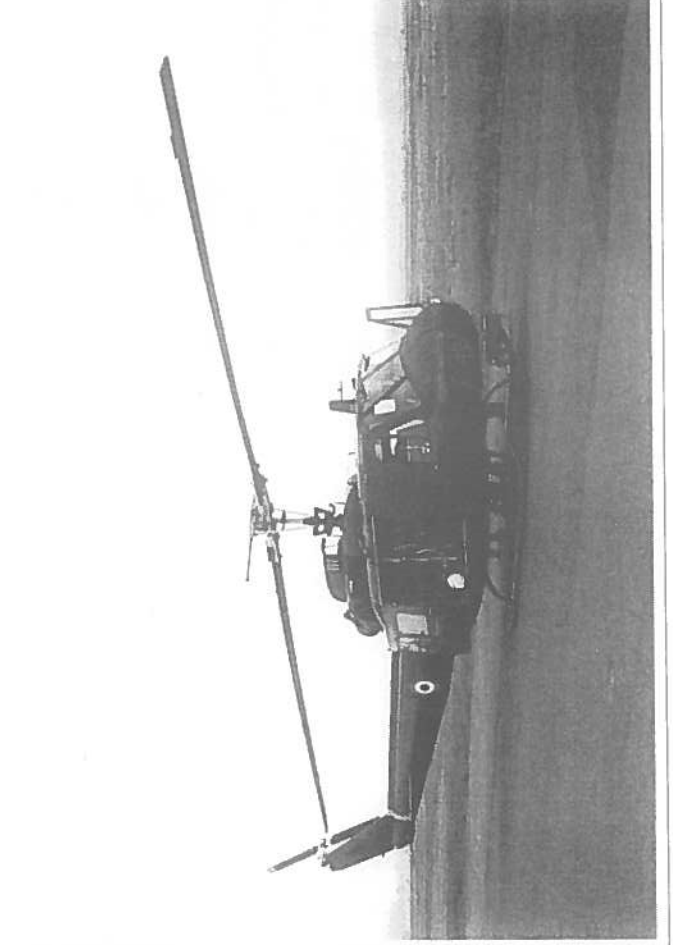
a



b



c



d

SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House

CONTENTS

Abstracts	76
Paraguayan Military Hueys (Sapienza)	78
Ikarus 451 M (Miklusev)	80
A Mexican Pilot in the Philippines (Flores)	81
Beriev MBR-2 (Kulikov)	86
Piaggio P-166 (Cance)	92
South African Aviation Corps (Thomas)	93
Ecuadorian Army Piper PA-18 (Delgado)	94
Cuban and Dominican Republic PT-17 (Delgado)	96
Books (White Eagles; CG 1/2; LeR 2; Enciclopedia Avion Militar Espanola)	98
Magazines (YASIG)	99
Kits (SM.75bis; CWL WZ-X; PZL L-2; Lublin R VIII)	100
Decals (MiG-21; Su-25; RYAF)	101
Letters (Flores; Baird)	103
Wants	103

SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

SUBSCRIPTION RATE: Subscription to the current volume of the SAFO is US \$14.00 for 4 issues in the USA and elsewhere via surface mail. For the cost of air mail delivery, contact the editorial office, or send \$26.00 and any surplus will be credited to your account. Payment should be made in cash, by International Money Order, or by a check drawn on a bank with a subsidiary in the US made payable to "Jim Sanders". New subscriptions begin with the next issue published after payment is received; if you desire otherwise, please specify which issues are desired. Send remittance to Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923 USA.

BACK ISSUES: Either back issues or Xerox copies of out-of-print issues are available for all issues of the SAFO published at \$3.25 each. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

MEMBERSHIP LIST: To promote cooperation between members, a list of SAFO member's names and addresses is available to SAFCH members for \$3.00 postage included.

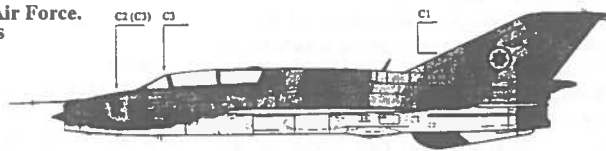
SPONSORSHIP PROGRAM: To keep the SAFCH truly international, our Sponsorship Program allows persons who can not obtain US cur-

rency to receive the SAFO. Any SAFCH member interested in sponsoring a SAFO subscription for a person in Eastern Europe (or from other country where it is impossible or difficult to obtain US currency) should write to the editorial office for a list of persons seeking sponsors. If you would like to receive the SAFO but can not obtain US currency, a list of SAFCH members looking for someone to sponsor is also available from the editorial office.

INFORMATION FOR AUTHORS: Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any photos returned, please mark "Return" on the back. All art work must be ready for printing. The layout should be such that when a page is reduced (if necessary) the drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

SAFO is distributed in England by Midland Counties Publications, 4 Watling Drive, Sketchley Lane Industrial Estate, Hinckley, Leics. LE10 3EY. Additional distributors in other countries would be most welcome.

MIg-21UM Georgian Air Force.
1/72 & 1/48 scale decals
Linden Hills Decals



Small Air Forces Observer
Statement of Ownership, Management, and Circulation

1. Publication Title SMALL AIR FORCES OBSERVER	2. Publication Number 439450	3. Filing Date 24 December 2001
4. Issue Frequency Quarterly	5. Number of Issues Published Annually 4	6. Annual Subscription Price \$14.00
7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
13. Publication Title SMALL AIR FORCES OBSERVER		
14. Issue Frequency Quarterly		
15. Number of Issues Published Annually 4		
16. Annual Subscription Price \$14.00		
17. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
18. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
19. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
20. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
21. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
22. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
23. Publication Title SMALL AIR FORCES OBSERVER		
24. Issue Frequency Quarterly		
25. Number of Issues Published Annually 4		
26. Annual Subscription Price \$14.00		
27. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
28. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
29. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
30. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
31. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
32. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
33. Publication Title SMALL AIR FORCES OBSERVER		
34. Issue Frequency Quarterly		
35. Number of Issues Published Annually 4		
36. Annual Subscription Price \$14.00		
37. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
38. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
39. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
40. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
41. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
42. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
43. Publication Title SMALL AIR FORCES OBSERVER		
44. Issue Frequency Quarterly		
45. Number of Issues Published Annually 4		
46. Annual Subscription Price \$14.00		
47. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
48. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
49. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
50. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
51. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
52. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
53. Publication Title SMALL AIR FORCES OBSERVER		
54. Issue Frequency Quarterly		
55. Number of Issues Published Annually 4		
56. Annual Subscription Price \$14.00		
57. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
58. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
59. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
60. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
61. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
62. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
63. Publication Title SMALL AIR FORCES OBSERVER		
64. Issue Frequency Quarterly		
65. Number of Issues Published Annually 4		
66. Annual Subscription Price \$14.00		
67. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
68. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
69. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
70. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
71. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
72. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
73. Publication Title SMALL AIR FORCES OBSERVER		
74. Issue Frequency Quarterly		
75. Number of Issues Published Annually 4		
76. Annual Subscription Price \$14.00		
77. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
78. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
79. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
80. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
81. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
82. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
83. Publication Title SMALL AIR FORCES OBSERVER		
84. Issue Frequency Quarterly		
85. Number of Issues Published Annually 4		
86. Annual Subscription Price \$14.00		
87. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
88. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
89. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
90. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
91. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
92. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
93. Publication Title SMALL AIR FORCES OBSERVER		
94. Issue Frequency Quarterly		
95. Number of Issues Published Annually 4		
96. Annual Subscription Price \$14.00		
97. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
98. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
99. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
100. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
101. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
102. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
103. Publication Title SMALL AIR FORCES OBSERVER		
104. Issue Frequency Quarterly		
105. Number of Issues Published Annually 4		
106. Annual Subscription Price \$14.00		
107. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
108. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
109. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
110. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
111. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
112. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
113. Publication Title SMALL AIR FORCES OBSERVER		
114. Issue Frequency Quarterly		
115. Number of Issues Published Annually 4		
116. Annual Subscription Price \$14.00		
117. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
118. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
119. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
120. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
121. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
122. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
123. Publication Title SMALL AIR FORCES OBSERVER		
124. Issue Frequency Quarterly		
125. Number of Issues Published Annually 4		
126. Annual Subscription Price \$14.00		
127. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
128. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
129. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
130. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
131. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
132. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
133. Publication Title SMALL AIR FORCES OBSERVER		
134. Issue Frequency Quarterly		
135. Number of Issues Published Annually 4		
136. Annual Subscription Price \$14.00		
137. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
138. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
139. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
140. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
141. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
142. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
143. Publication Title SMALL AIR FORCES OBSERVER		
144. Issue Frequency Quarterly		
145. Number of Issues Published Annually 4		
146. Annual Subscription Price \$14.00		
147. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
148. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
149. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
150. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
151. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
152. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
153. Publication Title SMALL AIR FORCES OBSERVER		
154. Issue Frequency Quarterly		
155. Number of Issues Published Annually 4		
156. Annual Subscription Price \$14.00		
157. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
158. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) 27965 Berwick Dr. Carmel, CA 93923-9518		
159. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Not printer) James V. Sanders 27965 Berwick Dr. Carmel, CA 93923-9518		
160. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a corporation or other entity, give the name and address of the publisher.) James V. Sanders 27965 Berwick Dr., Carmel, CA 93923-9518		
161. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None		
162. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) None		
163. Publication Title SMALL AIR FORCES OBSERVER		
164. Issue Frequency Quarterly		
165. Number of Issues Published Annually 4		

AUSTRIA

OFH NACHRICHTEN (Oesterreichische Flugzug Historiker, Pfenninggldf. 18/2/14, A-1160 Wien. Write for free sample.)

2/01 (36 pages) "B-17G 'Lucy'" 4 pages including 6 photos about a/c lost 27 Feb. '44. "Focke Wulf FW 44 Stieglitz" 4 pages on Austrian a/c including 3 photos and 2 1/72-scale 3-view drawings. "Grossmann Air Service" 4 pages including 3 photos a fleet list.

BRAZIL

REVISTA (IPMS Brazil, Rua Lucidio Lago, 457/206 Meier - Rio de Janeiro, CEP 20.780-020) E-mail: antonioliinhares@bol.com.br

#98 2001 (16 pages) "Os FW-58 B no Brasil" 11 pages including 6 photos and 3 pages of drawings.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$24.00 in US \$26.00 elsewhere).

27/2 (24 pages) "Variations of the Curtiss Hawk Model 75" 4 pages including a full-page table listing the differences in 11 categories for 28 Hawk variants including French, Finnish, Argentine, Chinese, and Thai aircraft [Ed: And you thought it was only a choice of fixed or retractable landing gear and single row or double row engine.] and the HobbyCraft 1/48-scale kits required to build each major variant. "Pumas' of the Royal Hungarian Air Force - Part2: Lt. Miklos Cserny -101/3 Fighter Squadron" one page including side-view drawing of his Bf 109 '7'. Inclosed with this issue are two sheets of decals: Canada Aces. Each sheet, one in 1/72 scale and the other in 1/48 scale, measures 21 cm by 13.5 cm and contains the national insignia (RAF), serial numbers, codes, individual emblems, and victory markings. These are high-quality decals, in perfect register with dense colors. Everything you need to finish a number of aircraft flown by Canadian WWII aces. Everything you need, that is, except an instruction sheet describing which decals go on which aircraft or even the types of aircraft. I don't know if these instructions were accidentally left out of my issue or if the aircraft will be covered in a future issue of RT. In any case, these are an excellent set of decals that would be very useful if you can find the information about the aircraft represented.

DENMARK

NYT (IPMS Denmark, c/o Lars Seifert-Thorsen, Guldregnevvej 4, 4600 Koge. 4 issues for 260 Dkr). Each issue includes a two-page English summary. Web: www.ipms.dk

#89 (40 pages) "Gulfstream III in RDAF Service" 5 pages including 6 photos (one in color). "Morane-Saulnier Type II in the Danish Army Flying Corps" 2 pages including 3 photos and a 1/72-scale 2-view drawing. Three color photos: Swiss Mirage & F-5E Tiger (2).

#90 (40 pages) Color photos: RDAF PBY-6A and UAE C-130.

#92 (40 pages) "Comparison of five Bf-109E 1/72-scale kits" 3 pages on comparing kits with the objective of building a Bf 109T including scale drawing and 4 side-view drawings.

#92.5 (40 pages) "Douglas D-558-2 Skyrocket" 4 pages including 4 photos from the NASA web site. Color photos: Thai Sikorsky S-58 & S-55, A-1 Skyraider, and Curtiss Hawk III. [Editor: The number of this issue is strange since #91 was mistakenly

printed as #92.]

ENGLAND

IPMS MAGAZINE (Ernie Lee, 51 Ball Road, Hillsborough, Sheffield, South Yorkshire S6 4LZ, 6 issues for £22.00 surface or £27.00 airmail.

3/2001 (40 pages) "Two into One" 3 pages on building the Hobbycraft HA-1112MIL as a 109 in the film 'Battle of Britain' including 5 photos of the model (2 in color) and a drawing of the upper-surface camouflage pattern. "Midway Survivor" 3 pages on building the Accurate Miniatures Avenger as the lone TBF to return to Midway after the battle including 7 photos of the model (4 in color).

THE CATALINA NEWS (Val Thomas, The Catalina Society, Duxford Airfield, Cambs, CB2 3QR, England. One year £15. Web Site: www.catalina.org.uk. E-Mail: david_legg@lineone.net)

#48 September 2001 (24 pages) "One Man & His Log" a 6-page account of flying in a RN Catalina 1941-1945 including 4 photos. "The Search for the Bismark" 3 pages on USN Cats searching for the Bismark including one photo. The usual "Cat" columns including 11 photos of Catalinas from both WWII and the present.

PLASTIC KIT CONSTRUCTOR (PAMAG Publications Ltd., Riverdale, 89 Graham Road, Sheffield, S10 3GP; 4 issues £18.00. (North American subscription agent: Wise Owl Publications, 1926 S. Pacific Coast Highway, Suite 204, Redondo Beach, CA 90277. E-mail: wiseowl@sprintmail.com. Web Site: www.wiseowlmagazines.com).

#64 Spring/Summer 2001 (36 pages) "Praga E.39" a one-page review of the RS Models 1/72-scale kit including 2 photos of the model. "Dynavector's TSR2 Kit" a 6-page review of the 1/48 scale kit including 28 photos of the model under construction. "Bulgarian Dornier Do 17P" 4 pages on converting the Do 17Z into a Bulgarian Do 17P including 5 photos of the model and scale drawings showing the necessary conversions. "de Havilland 86A" 2-page scale drawing. "Airfix's 1:24 scale Bae Harrier GR3/AV-8A/AV-8S" a 4-page review including 7 photos of the model. "Lysander Mk.I/III" a 5-page review of the 1/32-scale Revell kit including 9 photos of the model. "RAF Transonic Project" one-page with side-view drawings of aircraft and Lancaster "mother ship". Numerous shorter reviews: 1/48 U-2R; 1/72 Albatros D V; 1/48 RAF Be2e; 1/48 Pfalz D IIIa; 1/72 Fokker D VII; 1/72 Spitfire PR IX; & 1/72 Sopwith 1 1/2 Strutter.

21th Century Plastic Modeller, PAMAG (Publications), Ltd, Riverdale, 89 Graham Road, Sheffield S10 3GP, England. £2.25. Annual subscription (6 issues) £16.50 overseas or £20.00 airmail. \$33 from Wise Owl (see above).

#5 May/August 2001 (56 pages) "Airspeed Oxford" 3-pages of historical notes and a review of the 1/72-scale Frog kit including 2 photos of the aircraft and 10 photos of the model. "Hallamvac's Pilatus P-2" 4-page review of the 1/72-scale vacuform kit including 5 photos of aircraft & 7 of the model and 1/72-scale 4-view drawing. "Northrop P-61A/B Black Widow" 3-page review of the 1/48-scale Revell kit including 6 photos of the model (one in color). "Aichi Ryusei" 2-page review of the 1/72-scale Fujimi kit including 10 photos of the model.

One-page reviews: 1/72-scale Italeri Ju 86 B0 (4 photos); 1/72-scale Revell Ju 52 3m (2 photos) & Do 228-212 (3 photos); 1/72-scale Revell Ju 87 B2/R2 (2 photos); 1/144-scale Revell International Space Station (1 photo); 1/72-Revell Boeing X-32A (3 photos); 1/72-scale Toko II-3M3 (4 photos); and 1/72-scale Airfix A4D-1 Skyhawk (2 photos). Vintage scale drawings: Dewoitine D-501 (1 page); Blenheim IV (2 pages); and Northrop A-17A (1 page).

FINLAND

FINNISH AIR FORCE SIG, c/o Nils R. Treichel, Grosser Platz 4, 27432 Bremervoerde, Germany. Entirely in English.

No. 18 (10 pages) "Metal or Fabric" 3 pages on Finnish Hurricanes including 2 pages of drawings. "Petlyakov Pe-2 with PH conversion kit" 2 pages. "Shavrov Sh-2 in Profile" one page with 3 side-view drawings [Soviet & Finnish(2)].

FRANCE

AIR ZONE, Le Nouveau Mensuel de l'Air! (Air Zone Magazine, 53 rue Boissiere, 75116 Paris. E-mail: headland@airzone.net) A one-year subscription for 9 regular issues and two special issues is 405FF. Payment preferably by check drawn in FRF on a French bank, by draft or postal giro.) Photo captions in English.

#32 mars-avril (68 pages) "Gulf Falcon 6" 2 pages including 6 photos (Qatar Westland Commando). "Brasil: La consolidation del'Aviacao Naval" 13 pages including 23 photos (Skyhawk, Tracker, Sea King, Super Puma, Super Lynx, Esquilo, & Helebras). "Dans le nid des 'Predator'" 8 pages including 14 photos. "Eurocopter en 2001" 9 pages including 12 photos (Turkish Cougar, Saudi Panther, Spanish EC 120, Romanian Puma, & Greek Puma). "La Force Airienne Belge revient a la 'recce'" 2 pages including 6 photos (F-15 with 'recce' pod).

AVIONS: Toute l'Aeronautique et son Historie (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 420F for 12 issues).

#100 Juillet 2001 (80 pages) "Aces" issue. "Clostermann" 10 pages including 17 photos, 24 victories, 3 color side-view drawings (Spitfire & Tempest), & cover painting. "Hartmann" 10 pages including 19 photos, 352 victories, & 3 color side-view drawings (Bf 109). "Kozhedub" 9 pages including 10 photos, 62 victories, & 2 color side-view drawings (La-5 & La-7). "Martinoli" 5 pages including 10 photos, 25 victories, & 3 color side-view drawings (C.200 & C.202). "du Monceau" 5 pages including 7 photos, 8 victories, one color side-view drawing (Hurricane). "Iwamoto" 7 pages including 10 photos & 5 color side-view drawings (A5M & A6M). "Bong" 7 pages including 12 photos, 40 victories, & 3 color side-view drawings (P-38). "Serbanescu" 10 pages including 23 photos, 44 victories, & 2 color side-view drawings (Bf 109). "Johnson" 6 pages including 13 photos, 41 victories, & 4 color side-view drawings (Spitfire). "Juutilainen" 8 pages including 16 photos, 95 victories, & 2 color side-view drawings (Buffalo & Bf 109).

#101 Aout 2001 (68 pages) "Retros du Mois" one page with 2 photos (USCG Duck & Aeronautique Navale Goose). "Donnerkeil: 12 Fevrier 1942" 11 pages on the "Channel Dash" on the Gneisenau and Prinz Eugen including 27 photos of the ships and British & German aircraft. "Le Romeo Ro.37bis dans l'aviation militaire uruguayenne" 3 pages in-

cluding 7 photos and one color side-view drawing. "Sus a l'Allemagne!" 6 pages on Whitleys (6th part) including 8 photos and 5 color side-view drawings. "Le Dornier Do 22" 8 pages on prototype including 16 photos and 2-page cutaway drawing. "Marcel Haegelen et les Lorraine-Hanriot 41/42/130/131" 10 pages including 13 photos and 3 color side-view drawings. "Des avions francais en Tchecoslovaquie: Les unites de chasse sur Spad" 5 pages including 14 photos. "Le Bloch 152 au 1/72eme de Heller/Smer" 4 pages including 9 color photos of the model.

#102 Septembre 2001 (68 pages) "Retros du Mois" one page with 2 photos of Marcel Bloch MB 80. "La chasse du nuit italienne (3) La methode scientifique" 10 pages including 17 photos (Bf 110, Re 2001, Do 217, Beaufighter, Cant Z 1018, & SM 91), color cover painting, and 3 color side-view drawings (Bf 110 & Do 217). "Le Dornier Do 22" 13 pages including 23 photos (Yugoslav & Finnish), 3 pages of 1/72-scale multi-view drawings, and 3 color side-view drawings (Yugoslav & Finnish). "A.W. Whitley: fin de carriere dans le Bomber Command" 8 pages including 7 photos, a 2-page cut-a-way drawing, and 5 color side-view drawings. "Operation Donnerkeil: 12 fevrier 1942" 9 pages including 20 photos and 4 side-view drawings (Whirlwind, Bf 109F-4, Hampton, & Do 217). "Des avions francais en Tchecoslovaquie: Tout le monde descend!" 5 pages including 20 photos of crashed a/c (Spads 7 & 13, Letov S-1, Aviatik B.I, Aero Ab.11, & Breguet 19). "Le Glenn Martin 167F: Maquette multi-materiaux au 1/48eme de Koster" 5 pages including 18 color photos of the model in various stages of construction.

ITALY

AERO FAN Storia di Italiane. Italian-English text. (Giorgio Apostolo Editore, Via Ampere 49, 20131 Milano, Italy.) 4 issues L 80,000.

#77 Apr.-Jul. 2001 (68 pages) "S 79B in Romanian Service" 37 pages including 62 photos, 2 drawings of inboard profile, a 2-page 1/72-scale drawing, and 6 color side-view drawings (aircraft in prewar, wartime, & postwar insignia). Text covers the history of the procurement of the aircraft, different versions (S 79B, JIS 79B, JRS 79B, & JRS 79B1), initial combat on the Eastern Front, and contemporary account of two missions. [Ed: A marvelous account of this ugly twin-engined version (both with radial and with inline engines) of Italy's elegant trimotor S.79. For the modeler: Conversion from a S.79 kit does not seem possible, so it's either scratch building of waiting for some one to come out with a kit. A few years ago this would have seem to be wishful thinks, but now ... who knows. Maybe Broplan might want to add it to its line of Italian aircraft. A pair of models, one a radial-engined S 79B carrying the King Michael Cross and the other an JRS 79B with the roundel used when Romania fought on the side of the Allies, would be a impressive display.] "Gatto Nero and Pantere 1941-2001: A Chronological History of 155° Gruppo Caccia" 18 pages including 21 photos from WWII and 4 color photos of post WWII aircraft and 4 color side-view drawings (Fiat G.50, Macchi C.205, Republic F-84F, & Tornado ECR). The usual "Album di Aerofan" with 2 photos and "Le marche Civili Italiane" with table and 3 photos.

JP-4 Mensile di Aeronautica (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).
Giugno 2001 (100 pages) Color photos: Danish F-16 & Greek A-7. "Turkish Stars" 4 pages on

aerobatic F-5s including 7 photos. "Viaggio attorno al cavallino" 5 pages including 13 photos of Italian a/c carrying the 'cavallino rampante nero' squadron insignia.

Luglio 2001 (100 pages) Color photos: Egyptian MiG-21U & Swiss F-5E. "La caccia finlandese si aggiorna" 6 pages including 15 photos (Learjet, Hornet, Hawk, & Draken). "ATR-42 per la guardia costiera" one page including 3 photos.

Agosto 2001 (100 pages) "Le Bourget 2001" 14 pages including 35 photos (one each of Georgian Su-25 & Uzbekistan Mi-24). "In volo con Orca 8-04" 6 pages including 15 photos of very colorful Italian Guardia Costiera Piaggio P.166.

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, PO Box 40082, NL-8016 DB Zwolle). Now with English captions and summary.

1/2001 (32 pages) "De P-47 Thunderbolt van de Fuerza Aerea de Chile" 3 pages with 3 photos of the 1/72-scale model and 2 photos of the real thing. "Gloster Meteor F.Mk.8 in 1/72 en 1/32" 10 pages on Dutch Meteors including 7 photos of the model, 8 photos of the real thing, and 10 side-view drawings. "Oom Daan' en de laatste Zuid Afrikaansew Canberra" one page with one photo and one side-view drawing of an unmarked SAAF Canberra.

SPAIN

REVISTA ESPANOLA DE HISTORIA MILITAR (Carlos Fresno Crespo, Alcaniz Fresno's S.A., C/Cromo 18-20, Poligono Industrial San Cristobal, 47012 Valladolid) 800 Pts.

#10 Abril 2001 (64 pages) "Panzer IV en Espana" 8 pages including 13 photos and one color side-view drawing. "Los 'Morratos' desde la Patrulla Azul a la 7ª Escuadra de Caza" 9 pages including 33 photos and table (mostly personnel). "Tragedia en Cartagena" (2ª Parte) 12 pages including 17 photos and 6 color side-view drawings (Cant Z.501, Polikarpov R-Z, Grumman Delfin, Vickers 15.24 cm cannon, Soviet ship 'Smidovich', & Spanish ship 'Mar Cantabrico'). "De 'contrabandista' a Crucero Auxiliar" 20 pages including 18 photos and 3 color side-view drawings (Northrop Delta, Vultee V-1A, & Lockheed 10A Electra). Inserted posters: T-26B, Canon de costa L/45, Camion Blindado 'Federal', & Ansaldo-Lancia IZM).

#11 Mayo 2001 (64 pages) "Los ataques aereos a la Base Naval de Ferrol en 1936" 17 pages including 19 photos and 5 color side-view drawings [Savoia S.62 (2), Douglas DC-2 (2), & Potez 540]. "Nubes y totos" 2 pages including one photo and one color side-view drawing (Douglas C-47). "Fue el Heinkel He 70 o de Tetuan el untimo 'Rayo' que volo?" 2 pages including 2 photos and one color side-view drawing. "Avions sovieticos para la Republica" 5 pages including 6 photos and 5 color side-view drawings [I-15 (3), SB-2, & Polikarpov R-5]. "El piloto republicano Xucla, Espia al sericio de las nacionales?" 3 pages including 3 photos and one color side-view drawing (de Havilland DH-84). "Febrero de 1937: La 'Legion Condor' ataca las centrales del Pirinco" (1ª Parte) 5 pages including 10 photos and one color side-view drawing (He 70). Inserted posters: FT-17 (4).

#12 Junio 2001 (64 pages) "La defensa antiaerea de Mallorca durante la Guerra Civil" 23 pages including 40 photos, 2 maps, and 7 color side-view drawings (Macchi M.18, Savoia S.62, Avro 594, Fiat CR.32, Breda 20 mm, Macchi M.41, Krup 75 mm, "Canario" Azaola) 3 pages including 3 photos and one color side-view drawings (PWS 10). "U-Boote

en Galicia en la Segunda Guerra Mundial" 16 pages including 23 photos and color side-view drawings (U 558, Sunderland, Whitley, & Wellington). Inserted posters: Fiat-Ansaldo CV-35, Henschel 33 G/D 1, Vickers 120/45 mm, & Ford M-8 'Hercules'.

#13/L4 Julio-Agosto 2001 (80 pages) Almost the entire issue (62 pages) is devoted to Spanish coastal-defence artillery 1939-1945 with a multitude of photos, maps, and color drawings. "Los cambates navales de Cardenas y Manzanillo in 1898" 7 pages including 2 maps and 13 photos of the ships that took part in these Spanish-American War actions. "Historias a la carta" 2 pages including 3 photos (Spanish Nationalist Bu 131, Bu 133, & Ar 66 and one color side-view drawing (Ar 66). Inserted posters: Sturmgeschutz 40 Ausf G, Carro de Combate Medio AMX-30B, Obus de Bronce de 21 cm Mod. 1885/91, & Canon Antiaereo de 88 mm L/56 Flak 18.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$30.00 USA or \$30 overseas).

#173 Aug 2001 (146 pages) "Gustave Whitehead and the Legend of No. 2" 9 pages. "Gustav Tweer" (Part II) 13 pages, 8 photos, and 2 3-view scale drawings (Fokker 'Spinne' & Pegoud). "Sturtevant Aeroplano Co (1915-1919)" 11 pages including 15 photos. "Preserving the Standard J-1 Biplane" 7 pages including 8 photos. "The unknown Liberty Engines" 12 pages including 12 photos. "American Air Power Doctrine" 5 pages. Drawings: Morgan Mountaineer, Spad XI, Burgess SC.17, Phoenix 26/61, Vindobona, Albatros D.III, S-S.D.IV.

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$30.00 USA or \$35.00 overseas).

#59 Jul. 2001 (84 pages) "Vultee P-66 Vanguard" 17 pages including 15 photos and three 3-view scale drawings (Model 61, Model P48X, & P-66). "The Paramount Aircraft Corporation" 15 pages including 15 photos, 3-view scale drawings of their Cabinaire s/n 5, s/n 7, side-view drawings of 4 other Cabinaires, and 5-view scale drawings of Sportster float plane. "Cockpits: Curtiss-Wright CW-15 Cub Sedan" 2 pages with 2 photos. "Details: Macchi M.39 Racer" 13 pages including 6 photos and 9 pages of scale and detail drawings. "NYRBA Visit" 3-page account of 1930 inspection trip including one photo (Fleetster 17). "Identification unknown" 4 pages including 10 photos.

ESM 72 (Model-Aire International, PO Box 159, Olema, CA 94950. E-mail: maiesm72@aol.com. Web site: members.aol/Maiesm721/maiwebpg.html.) Quarterly. \$25.00 for four-issue volume. \$30.00 outside the USA. Back issues available at same price per volume.

Vol 5, No 2, (58 pages) "Helicopters, Autogyros & VTLO Aircraft" 15 pages. "Aircraft Updates" 10 pages. "Vehicles" 4 pages. "Vehicles Updates" 2 pages. "Engines, Cowlings & Props" 10 pages. "Ships & Boats Updates", "Rockets, Missiles & Spacecraft Updates", "Artillery Updates", "Vehicle Conversions Updates", "Vehicle Parts & Accessories Updates", "Figure Updates", "Terrain & Diorama Updates", "Railway Locomotives & Rolling Stock Updates", "Aircraft Conversion Updates", "Aircraft Canopies & Turret Updates", "Glider & Sailplane Updates", & "Aircraft Interior Details Updates" 13 pages.

Paraguayan Military Hueys

Luis Sapienza Fracchia

A total of nine Bell UH-1 Huey helicopters have seen service in Paraguay, six of which belonged to the Paraguayan Air Force and the remaining three to the Dirección de Narcóticos DINAR. At the present time (September 2001), only three remain in service.

The Paraguayan Air Force bought two Bell UH-1Bs in the USA in 1982 for its Helicopter Squadron of the Grupo Aéreo de Entrenamiento y Transporte (GAET). They were painted in a two-tone camouflage of dark and light gray. Ten FAP pilots and the same number of mechanics received training in the Brazilian Air Force UH-1 squadrons in Brazil. The Hueys were intensively used for transport and MEDEVAC duties. During the terrible floods of the Paraguay River of that year, the two Hueys rescued many people who lived in the cities along the river. From 1985 on, the UH-1B pilots started wearing the "Helicopter Pilot Wings" which was approved by the Commander in Chief of the FAP. In 1988, the Grupo Aéreo de Helicópteros (GAH) was formed and the new FAP organization included this group as a combat unit. One of the Bell was withdrawn from service in 1987 due to some problems in the main rotor. The other UH-1 was in active service until 1991 and both were sold to Chile to a civilian owner that year.

The next Hueys to arrive were not for the FAP, although they were always piloted by Air Force officers. They were three UH-1Bs, which were bought by the DINAR. They were painted in a very strange three-tone camouflage of brown, sand, and green. It is said that the director of the DINAR, a Paraguayan Army General chose the color scheme from an aviation book he found in his own library. According to one source, the color scheme he liked was the Israeli one! These choppers were going to be used in an area of deep forests where the predominant color is green. The only markings painted in them were a tiny Paraguayan flag and the serial on the tail. Since the DINAR was under direct command of the President of Paraguay, the serials received the prefix PR (for President) followed by the H (Helicopter) and three digits. The UH-1Bs were purchased from an Argentine company called Servicios Especiales S.A. in 1996 and were flown by FAP pilots. Some Paraguayan Naval Aviation officers also received training in these choppers. Their base was always the FAP's Grupo Aéreo de Helicópteros hangar at Ñu-Guazú AFB. The purchase of these Hueys was surrounded with corruption since the DINAR paid 3 million dollars for them (US\$ 1 million each). The details of the purchase were not revealed then. Although intensively used to locate and destroy clandestine plantations in the Amambay region of Paraguay, next to the Brazilian border during the rest of 1996 and 1997, two of them were not in flying conditions at the beginning of 1998. After a technical inspection, severe metal corrosion was found in both helicopters and they were withdrawn from service. The third one saw some more operations for two or three months and was then grounded. The local press started investigating the "Huey Affaire" and what

was found out made the Director of the DINAR resigned, being arrested and sent to jail. The three DINAR choppers remain in storage at Ñu-Guazú AFB.

In October 1996, the Taiwan Government donated two Bell UH-1Hs to the FAP's Grupo Aéreo de Helicópteros. They were painted in overall dark green. All the titles were painted in black. Both, police fire fighters and volunteer fire fighters were trained in rescue missions with the UH-1Hs. In 1998, during a fire in a hotel in downtown Asuncion, one UH1H rescued some hotel personnel and guests. During that year, a terrible drought threatened many Indian communities in the Chaco region, so the FAP decided to send both UH-1Hs to that zone with food and water. One of them was lost in a non-fatal accident in the Chaco Region. Apparently, the Huey ran out of gas and crashed. The entire crew survived with just minor injuries and was rescued by an Esquilo helicopter the following day.

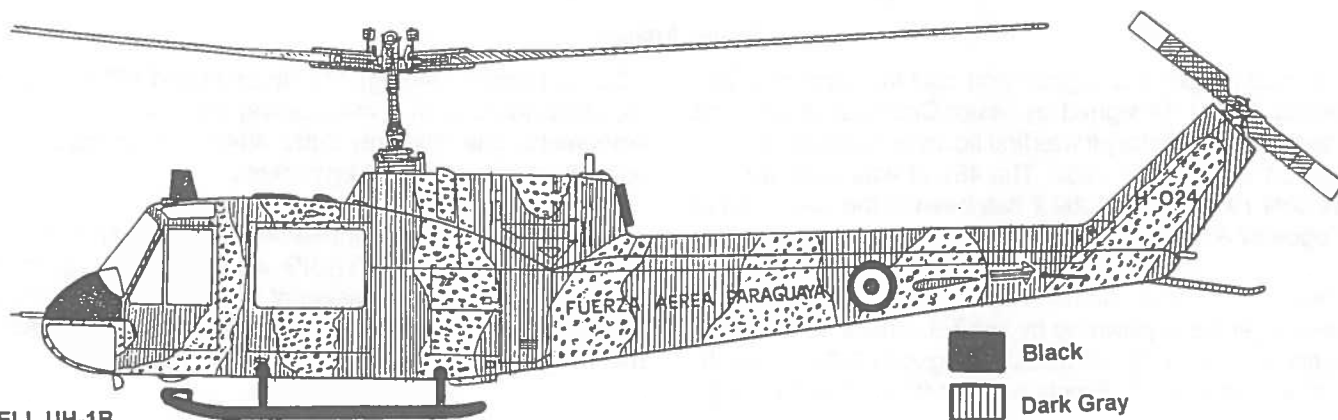
Finally, two other UH-1Hs were donated to the FAP by Taiwan. They arrived in 2001 and according to FAP sources four more of these choppers will arrive, one of them fit as an air ambulance. It is good to remember that Paraguay is the only South American country with diplomatic relationship with Taiwan. In the past, Taiwan also donated six Lockheed AT-33A to the FAP and promised to donate 12 Northrop F-5E/F. The US Government did not give the OK to this donation due to the political instability in Paraguay. Besides, the FAP doesn't really need supersonic fighters since more Tucanos will probably be better suited for its present roles and they will also be more economical to maintain.

At the present time, three UH-1Hs are in active service in the FAP. They are used in transport and MEDEVAC duties. One is permanently on alert for SAR missions. A few months ago, there was a horrible highway accident when a freight truck collided with a passenger bus, with the loss of six people. The FAP UH-1Hs took the severely injured passengers to Asuncion. The Hueys crews are always called whenever there is a plane accident too. This was the case of a small Cessna carrying three passengers, which failed to take off from an unpaved runway in the countryside, and crashed. The pilot and passengers were severely injured, so the SAR Squadron was called and the FAP sent a UH-1 H immediately. They were rescued and taken to a hospital in Asunción.

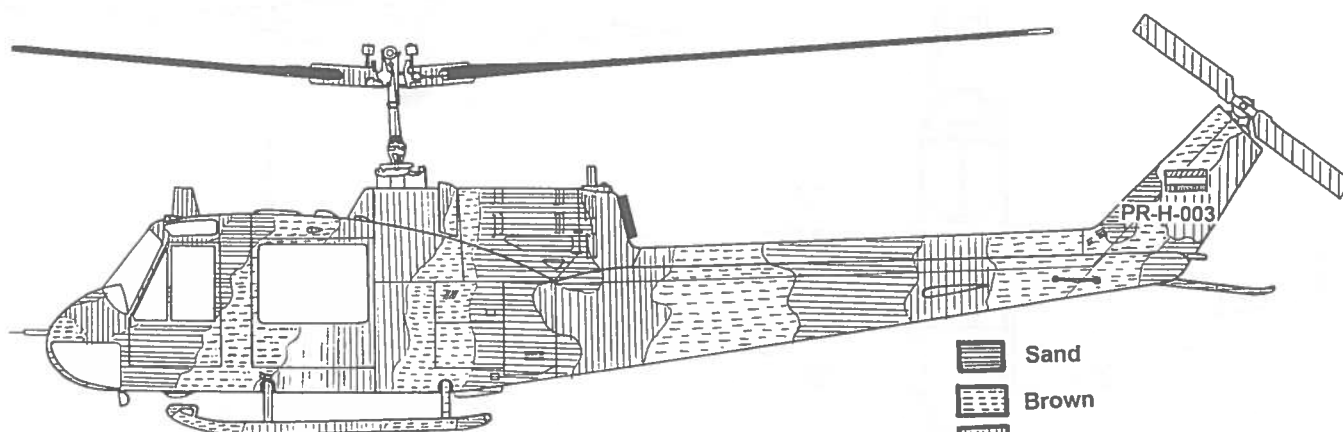
Recently, a Huey was called for a VIP transport mission. During the recent visit of the Costa Rican President, he was picked up by a FAP UH-1H at Asunción International Airport and taken to the Government Palace for a meeting with the President of Paraguay. This was done because Asunción's streets were blocked by a bus strike.

Once the other Hueys are received, they will be distributed among the other FAP air bases.

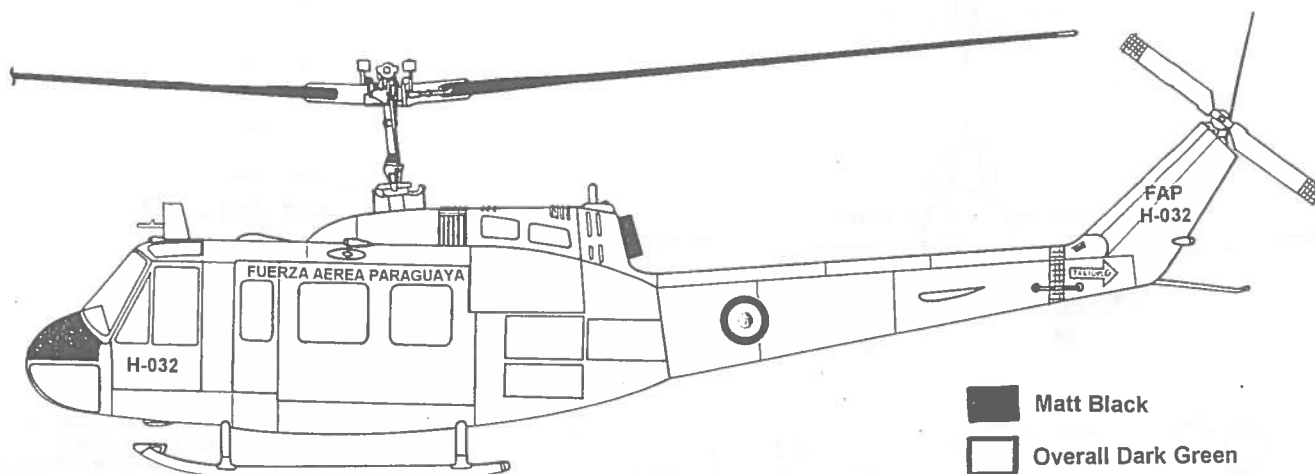
Continued on page 85



BELL UH-1B
 ESCUADRON DE HELICÓPTEROS
 GRUPO AEREO DE ENTRENAMIENTO Y TRANSPORTE (GAET)
 FUERZA AEREA PARAGUAYA (FAP)
 Base Aérea de Ñu-Guazú, 1982.



BELL UH-1B
 DIRECCION DE NARCOTICOS (DINAR)
 SECRETARIA NACIONAL ANTIDROGAS (SENAD)
 Base Aérea de Ñu-Guazú, 1996.



BELL UH-1H
 GRUPO AEREO DE HELICÓPTEROS (GAH)
 FUERZA AEREA PARAGUAYA (FAP)
 Base Aérea de Ñu-Guazú, 2001.

ANTONIO LUIS SAPIENZA FRACCHIA
 (SAFCH 1160)

Yugoslavia's First Jet Plane

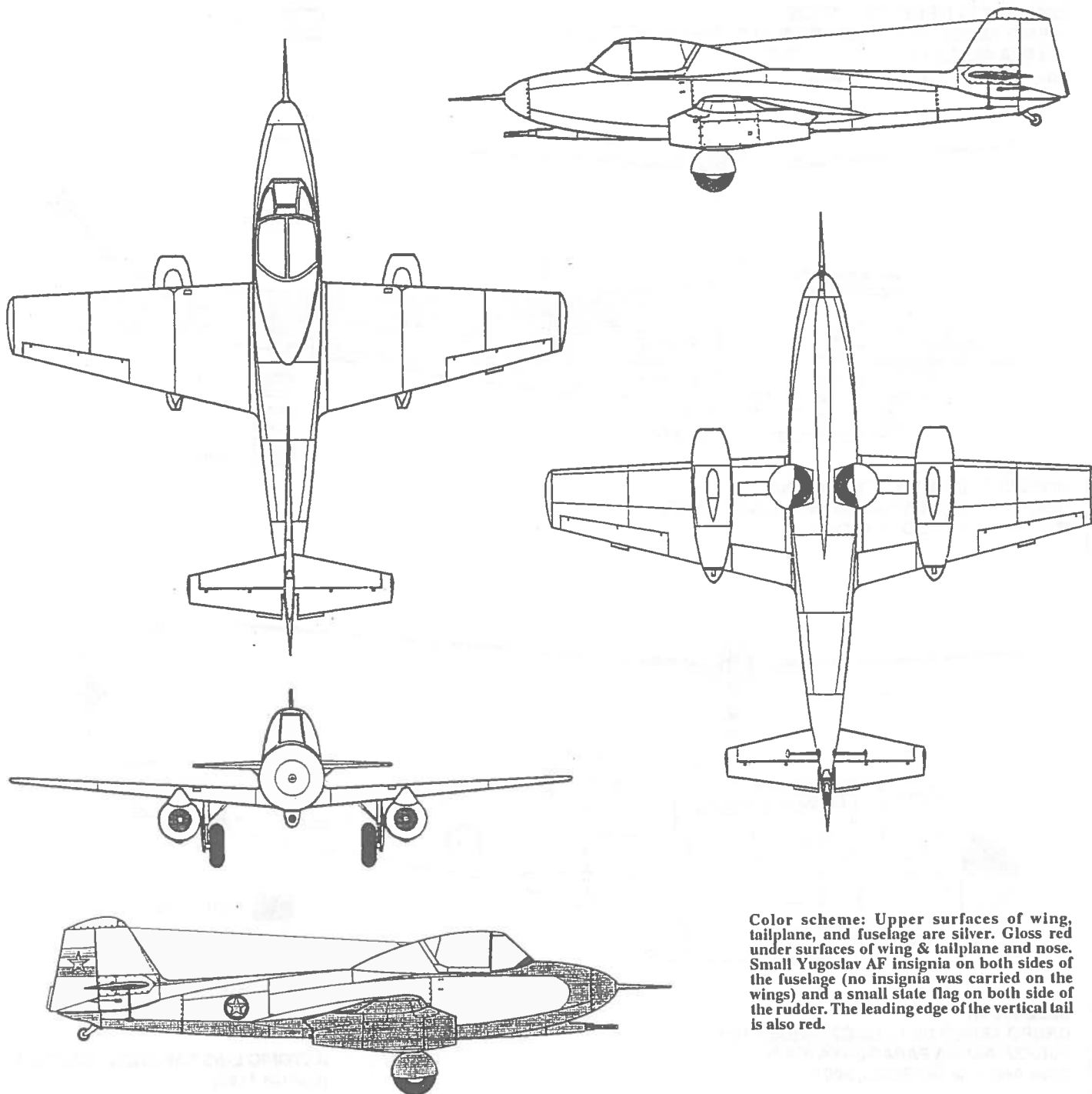
Nenad Miklusev

The first jet plane designed and built in Yugoslavia was the Ikarus 451 M. Designed by Major Dragoljub Beslin and built by the Ikarus factory it was first flown by Captain Tugomir Prebeg on 25 October 1952. The 451 M was used for test flights until 1956. Since 1962 it has been in the collection of the Yugoslav Aviation Museum.

Technical Specifications: The Ikarus 451 M is a small single-seat jet plane powered by two Tubomeca Palace 056A turbojets each of 1.47 kN thrust. Wingspan 6.70 m; length 7.40 m; wing area 8 m². Empty weight 897 kg; takeoff weight

1209 kg (armed 1349 kg). Maximum speed 453 km/h at 3000 m; climb to 3000 m 5 min; ceiling 7950 m; range 262 km. Armament: one Hispano Suiza 404A 20-mm machine gun with 50 rounds and six 8 kg rockets.

[Ed: This article first appeared in Bulletin of the (Yugoslav Special Interest Group) YASIG #1-4 2000 and is reprinted here with the kind permission of the author and editor (and SAFCH member) Nenad Miklusev. See review of YASIG in the 'magazine' section of this issue of SAFO.]



Color scheme: Upper surfaces of wing, tailplane, and fuselage are silver. Gloss red under surfaces of wing & tailplane and nose. Small Yugoslav AF insignia on both sides of the fuselage (no insignia was carried on the wings) and a small state flag on both side of the rudder. The leading edge of the vertical tail is also red.

Liberation of the Philippines

A Mexican Pilot view of the Air War in the Pacific

Santiago A. Flores

The 201st Mexican Fighter Squadron of the Fuerza Aerea Expedicionaria Mexicana (Mexican Expeditionary Air Force - MEAF) is the only Mexican military unit that has fought outside of Mexico. The Squadron participated in the liberation of the Philippines while assigned to the 58th Fighter Group, 5th Fighter Command, 5th Air Force.

The MEAF arrived in the Philippines in May 1945 under the overall command of Col.P.A. Antonio Cardenas Rodriguez (1905-1969) and Squadron 201 under the command of Capt.1/o.P.A. Radames Gaxiola Andrade (1915-1966). They flew combat operations in support of American ground troops in their advance against Japanese forces in northern Luzon from June to July 1945. At first they flew various sub-types of the Republic P-47D Thunderbolt fighter-bombers which had been loaned to them by the 58th Fighter Group. Some of these aircraft were ex-348th and ex-35th Fighter Group aircraft which were handed over when these Groups converted to the North American P-51D. The 58th was then the only unit operating the P-47's in the 5th Air Force. New Lend-Lease aircraft for the 201st arrived in June. In July 1945, the 201st flew long range Fighter Sweeps over Formosa and in August a dive-bombing mission to the Port of Karenko, Formosa. The MEAF lost two pilots while training in the United States (Texas 1944-45) and five pilots in the Philippines and New Guinea while on training or ferrying missions. One ground member died in a military hospital in the US due to illness contracted in the Philippines. Two pilots training in the United States as part of the replacement group were killed in 1945.

In September 1945, the MEAF was assigned to the 13th Air Force and, with the end of the war, it returned to Mexico in November 1945. After its return, the MEAF was disbanded by a Presidential Decree on December 1, 1945. The 201st Fighter Squadron was returned to the Mexican Air Force control and were given new Republic P-47D-3-RA's since the Lend-Lease P-47's were left in the Philippines.

The historical tradition of the MEAF is still carried on by Escuadron Aereo de Pelea 201 that today forms part of the 4/o. Grupo Aereo (4th Air Group) flying out of Cozumel, Quintana Roo, with Pilatus PC-7 Turb-Prop COIN/CAS trainers. This unit saw action during the Chiapas rebellion in January 1994.

A Pilot's Experiences

One of the few Mexican pilots to leave a written account of his experiences in the Philippines was then Teniente Piloto Aviador (1st Lt. Pilot Aviator) Amador Samano Pina. He was born in July 1919 in Metepec, State of Mexico. In 1936, he joined the Mexican Army by entering the Heroico Colegio Militar (Mexico's West Point). He graduated as a Infantry Sub Teniente (2nd. Lt.) on January 1, 1939. After serving in a infantry battalion, he request and was granted admission to the Escuela Militar de Aviacion (Military Aviation School) on January 1, 1940. On July 2, 1943, he survived a crash of a Vultee BT-13/15 basic trainer in which his instructor, Tte.P.A.

Miguel Uribe Carballeda, was killed. He recovered to complete his training and receive his wings on September 1, 1943. After graduation, he was assigned to the 3/o. Escuadron Aereo (3/o. Aerial Squadron) at Tampico, Veracruz, flying North American AT-6 Texans on anti-submarine patrols over the Gulf of Mexico, during which time he survived another accident. He was later detailed to a government agency. On February 3, 1944, he was assigned to Escuadron 201 as a Armament Officer and later he was selected to go with this unit as part of the Grupo de Perfeccionamiento Aeronautico (Aeronautical Training Group) for training in the United States. On January 1, 1945, this unit became the Fuerza Aerea Expedicionaria Mexicana (FAEM). While in the Philippines, Tte. P.A. Samano Pina flew in Flight "C", known as Gavilanes (Sparrow Hawks), under the leadership of Tte.P.A. Hector Espinoza Galvan (KIFA 16 July 1945). During his tour, he was credited with carrying out 20 combat missions with about 70 hours of combat time and 33 additional hours of flying in the theater of operations.

For his service in the MEAF, Samano Pina was promoted to the rank of Captain. He left the service for a short time after his return to Mexico to fly for Compania Mexicana de Aviacion (Mexicana). He returned to active duty in 1947. From 1950 to 1958 he commanded the 201st, during which time he was promoted to Teniente Coronel P.A. (Lt. Col.P.A.). He retired from the air force with the rank of Brigadier General in June 1966. On February 3, 1987, he was killed during an attempted robbery at his home in Cuernavaca, Morelia. His story, is one of the very few that has been told about the Pacific war from a Mexican pilot's point of view.

[Ed: The words from Samano Pina's diary are in italics without quotation marks. The words of other sources are in italics with quotation marks. The author's comments are in normal font.]

Squadron Operations

After the first combat missions of Squadron 201 (which started in early June 1945 with the pilots flying with the 58th FG in their own formations lead by Americans) it was naturally that some events occur that would eliminate some of our best pilots. The next one to die after "Cachito" (Sub.Tte.P.A. Fausto Vega Santander, the first squadron casualty overseas, KIFA June 1, 1945, during a practice dive-bombing mission in P-47D-15, s/n 42-232228) was Tte. P.A. Jose Espinosa Fuentes. On 5 June 1945, he volunteer to test fly a P-47 (P-47D-28-RA, s/n 42-28528, Squadron #6.) When his engine failed on take off, he could have saved himself if he had gone straight for a force landing without turning as specified in the aviation manuals. But, in front of him was a military camp and, instead of crashing into the troops, Tte. Espinosa turned to the right crashing into the Pampanga Sugar Mill near the town of Florida Blanca, Luzon, and was burned to death. Another witness to this particular incident was the C.O. of the 58th FG, Col. Ed Roddy, a fighter ace with eight victories who had come from the 348th FG, a well-known P-47 outfit. "At

Porac Air Base I was near the ramp area at the end of the runway and one of the 201st birds was checking his mags. The drop in the rpm was obvious to me and I mentioned that this was the place to find engine problems - not after you got in the air. Well I was dumbfounded when the plane taxied into position and started its takeoff, still missing badly. This was Espinosa and he died when his plane hit the sugar mill. I looked up Gaxiola to express my condolences and noticed that the Mexican flag was still at the top of the flagpole. I question him about this explaining to him what our procedures were. He told me he would call Col. Cardenas (at Fort. Stotsenberg) and let me know. About an hour later, he stopped by to tell me that the Mexican flag only comes down to half-mast when some great statesman dies. I told him, since the 201st was part of our outfit, we going to lower the Star and Stripes as a tribute to a fallen comrade. It was his turn to be awed." Tte. Espinosa was described by Samano Pina as of high stature so we nicknamed him 'El Chiquito' (The Small One). He came from the Military Signal School and was of good character. He had recently married and left no heirs and we felt his loss greatly.

Samano Pina described operations as follows: I didn't know how the command designated our targets but as an officer it was my duty to follow orders and that's it. Later in a friendly conversation with Col. Cardenas, Chief of the Mexican Expeditionary Air Force, he said that in the selection and priority of targets, the American command showed the kindness to ask us what type of targets we preferred. Our main interests were in concentration of enemy troops and their supply centers. The Americans provided us with detailed information from their intelligence services. We received daily reports on the ground operations and updated day-by-day situation maps on the advances of the American forces in the north in the valley of Cagayan River, to the northwest in the region of Baguio, and to the east in the region of Infante.

In the ground echelon of the squadron, things were happening. Tte. de Artilleria Cesar Velasco Ceron suffered a vehicle accident in which he hit his head, temporarily losing his senses. I visited him in the tent that served as the hospital, as we had been good friends and students since the good old days in the H. Colegio Militar. Velasco Ceron could only repeat constantly in English, "What Happened?". His duty was that of the intelligence officer along with Capt. Jesus Blanco Ledezma. As a result of the accident to Velasco Ceron, Capt. Blanco had to handle all the work. Another accident was suffered by our pay officer, Major de Infanteria Guillermo Linage Olguin, when he broke his arm falling into a ditch.

On July 23, 1945, a detail under the command of Subtte. de Administration Guillermo Albert Robles was sent to cut wood in the Peninsula of Bataan. They were surprised by a Japanese soldier who fired on them, wounding Soldado Enrique Moedano Gomez in the arm. The Japanese soldier fled into the jungle and could not be found when the area was searched.

On August 26, 1945, another detail consisting of one officer and ten enlisted men under command of Tte. Meteorologista Jose Cruz Abundiz Cano, came upon a Japanese guerrilla. When they tried to capture him, another Japanese soldier came at them about to throw a hand grenade. They fired and killed this soldier, but the surprise

was lost starting a shoot-out in which two Japanese soldiers were captured. [The Japanese soldier who was about to throw the hand grenade was only wounded by Cabo Armero (Cpl. Armorer) Ricardo Quintal Pinzon and captured.] I was in the camp when Corporal Olegario Gomez Rodriguez arrived with the two POWS one of them wounded. They looked thin and dirty reflecting the sufferings of their defeat. We gave them food and cigarettes and later handed them over to the U.S. Military Police.

I realized that all military personnel are the same. We have the idea to serve our country and to sacrifice our lives if necessary. Propaganda has not affected me with hatred towards the enemy. We are professional soldiers and we are often ordered to bomb and strafe the enemy. They say that men many cannot stand war, but many cannot stand peace; mostly the young ones with much energy. I remember many soldiers of our unit who wanted to go into combat and they felt disappointed because, as a fighter squadron, they didn't fight as an infantry battalion. Everybody wanted to fight, but, being an aviation specialist, their mission was to maintain the aircraft and the unit in perfect conditions. We had mechanics, armorers, clerks, medics, drivers, cooks, mail clerks, orderlies, etc. A pilot needs the support of ten to eleven of the other specialties. For example, Col. D.E.M. Alfonso Gurzan and Major Major D.E.M. Enrique Sandoval Castarrica, from June 15-26, observed airborne operations in support of the 33rd Infantry Battalion of the American Army in the region of Baguio, Luzon. Our intelligence officer, Capt. Blanco Ledezma, could not withstand his urge to get into combat; he hitched a ride on a 5th Air Force aircraft on a bombing mission to Formosa on June 5, 1945.

Air Operations

One of the most memorable missions flown by Tte. Samano Pina was one flown on June 17, 1945: One important mission was number 1-16 of June (17th) in the Region of Payavan Restlow (Chart 3641-16). Led by the ground controller 'Bygone' our flight leader discovered an enemy convoy on a secondary road and notified us to strafe it, and as you can imagine, we strafed the hell of it! The flight headed straight for the target, I had a truck right in front of me. We rapidly closed in, I let go two burst. After the second one, I saw flame rising from the vehicle and we gained altitude to avoid any explosions while the others were doing the same to the convoy. Enemy anti-aircraft fire was light and not very accurate. Two aircraft of our flight were hit by machine gun fire. Along with the strafing we dropped fourteen 1,000 lb bombs (General Purpose ANM-65). With this mission our leader, Tte. Hector Espinosa Galvan, showed himself to be precise and effective leader, obtaining good results in all missions he led. In this instance, we had taken off at 1330 hours and landed back at 1545 hours. During this mission eight P-47's had taken off, flown by the following pilots: Tte. Carlos Varela Landini, Tte. Fernando Hernandez Vega, Tte. Amador Samano Pina, Tte. Joaquin Ramirez Vilchis, Subtte. Miguel Uriarte Aguilar, Subtte. Manuel Farias Ramos, and Raul Garcia Mercado. Two aircraft returned early: Tte. Hernandez Vega and his wingman Subtte. Uriarte Aguilar. A total of 12 bombs were dropped and 6,900 rounds of 0.50 cal. ammo was used.

The next day we were notified that the pilots of 'C' flight

had the day off. We were loaned two light vehicles to go into Manila. Our Medic, Major. M.C. Ricardo Blanco Cancino, recommended caution - do not eat fruit to avoid stomach problems, be careful with the water, with this and that!. When we arrived in Manila, we found a Spanish Colony where we made friends due to our common language. We inquired about a good restaurant and were recommended 'Ciros' where we found high-ranking American officers and well-accommodated Filipino families. I ordered a dish of white rice with a filet which was the best thing on the menu. The filet was microscopic, due to the war, and I was charged 10 Filipino pesos which was about five US dollars or about 24.00 Mexican pesos. Which made me remember when I was stationed in Zacatecas where 'Madre' Maria would feed us for about \$1.50 pesos daily!. They say there are not two Mexicos! After that, we went to visit Sr. Alfredo Carmelo, the Mexican Council in Manila. Sr. Carmelo was the first Filipino to learn to fly when he soloed on January 9, 1920, in a Curtiss Seagull seaplane. He treated us well and invited us to dinner. After the war, Sr. Carmelo and his family moved back to Mexico where he frequently gave receptions to the members of the squadron. Mr. Carmelo assisted the MEAF in many ways acting as their facilitator in their operations, assuming the role as translator, and opening his house to the members of the MEAF during their visits to the city of Manila. Col. Cardenas would later award Sr. Carmelo honorary Mexican Air Force wings and make him an honorary member of the MEAF. Sr. Carmelo continued his participation in aviation; flying his last aircraft at the age of 75.!

After dinner, we returned to Porac, keeping our 45's ready because enemy guerrillas were still around. Luckily nothing happened. We went to bed to be ready for the next day.

On the 20th of that month, Samano Pina would fly his next ground support mission, one that would have some serious consequences. As in any ground support mission, there was always the risk of hitting friendly troops by mistake. This mission was a Air Alert over the area of Antipolo led by the Squadron Commander, Capt. Radames Gaxiola Andrade, with Tte. Samano Pina and four other Mexican pilots and two American pilot. The final mission report reads as follows: "*Led by elements of liaison detachment 'Curless 1', the leader was to make contact with an L-5 aircraft. Capt. Andrade reported he made contact with the liaison aircraft which marked the target with smoke bombs. The formation bombed the target and made two strafing passes. The pilots observed all bombs exploding on the target area. The leader observed two red-color smoke bombs to the side of the target. The ground controller 'Curless' reported the results as satisfactory. Later, reports were received at the 5th Fighter Command that the formation had carried out the attack in the vicinity of Purro Mountain where American troops were operating. The attack had effected, in part, these troops. It was later found that there was a bad misunderstanding between the leader of the formation and the ground support, and in the area there were many L-5 aircraft operating which contributed to the confusion. The formation had taken off at 0730 hours and returned two hours later. 16 general-purpose bombs (1,000 lb) with instant fuses were dropped over the target and 5,260 rounds of 0.50 ammo were fired.*"

In a study about the MEAF, Lt. Col. Jose Gerardo V.

Rivera of the Mexican Air Force wrote the following concerning this particular incident: "*Although the available and unclassified mission reports of the Vth Fighter Command, 58th Fighter Group, and the 201st Squadron, do not indicate cases of fratricide during the Mexican missions, Lt. Col. Sandoval Castarrica wrote that on one occasion the SAP (Support Air Party) and the L-5 pilot (Forward Air Controllers) designated the target with white smoke bombs and cleared the attack, indicating satisfactory results with all bombs observed impacting the objective area; later the Vth Fighter Command notified that the attack affected American troops. The next two flying days pilots from the 58th Fighter Group replaced the American liaison pilots and accompanied the squadron's flights.*"

Tte. Samano Pina would fly his next mission on the 23rd; an air alert over the area of Antipolo. This mission was led by Capt. Pablo L. Rivas Martinez with Tte. Hector Espinosa Galvan, Carlos Corona Rodriguez, Sub.Tte. Miguel Moreno Arreola, Manuel Farias Rodriguez, Guillermo Garcia Ramos, and an American pilot. The final mission report reads as follows: "*As directed by SAP 'Curless 2', 8 a/c bombed and strafed enemy positions making one bomb run and one strafing run from the south east to north west with results unobserved by the pilots because of heavy foliage. Four large explosions were observed south of secondary road running from 52.0-20.7 to 51.5-20.8. SAP reported the bombing and strafing results as 'very good' except for two bombs which were long, striking approximately at 52.1-81.2. Two a/c were badly damaged on landing upon return from this mission. One pilot was injured; probably fracturing his arm. 16 x 1,000 lb GP ANM-65 with ANM103A1 nose fuse and ANM102A1 fuse, both instantaneous were expended over the target. 5,370 rounds of cal.50 ammunition were expended.*" The two P-47's damaged during taxing were flown by SubTte. Manuel Farias Rodriguez and SubTte. Miguel Moreno Arreola (P-47D-28-RA s/n 42-28504).

On the 24th, Tte. Samano Pina led Tte. Graco Ramirez Garrido, Subtite Mario Lopez Portillo, Jose L. Pratt Ramos, Angel Rebollo, and an American pilot, obtaining the following results: "*As directed by SAP 'Curless 2', 6 a/c. bombed enemy concentrations marked by WP on the east bank of a ravine. Due to poor weather, the bombing was made in close formation, the leader diving his flight through a hole in the overcast. SAP 'Curless 2' reported the bombing OK and that all 12 bombs had struck the target area.*"

These last three missions were not part of the original article but have been include to show the different types of missions flown by Mexican pilots in the Pacific war.

More Squadron Losses

We continued our ground support flights in the battle area (until the last one which was flown on July 4, 1945), learning tactics, organization, emergency procedures, formations, etc. We received good news when we were advised that our new aircraft had arrived and we had to pick them up from the island of Biak, near New Guinea and at Tacloban on Leyte. The aircraft in question were Lend-lease P-47D-30-RA that arrived in late June 1945. A total of 25 were allocated to the Mexican Squadron. I went to the later place, which was much closer, with Tte. Fernando Hernandez Vega and Subtite. Manuel Farias Rodriguez. We were transported in a B-25

Mitchell medium bomber. I took the tail gunner position and, upon arriving at Leyte, I saw crashed aircraft on the side of the airstrip; about 30 A-24's and F4F Wildcats. I was told that before the base was finished, the Japanese had sunk a carrier while these planes were in flight (the Battle of Leyte Bay, October 1944). They went to the island and, finding the runways not yet completed, they crashed. Later, on another air strip, saw hundreds and hundreds of new P-47's and P-51's which convinced me that the Japanese didn't have the remotest chance of winning the war. Their armed forces would succumb to this impressive air supremacy. Their 'Banzai' charges and 'Kamikaze' attacks could only serve to delay their final defeat.

We inspected the new aircraft which we were supplied and they had many new features such as bubble canopies that permitted a visibility of 360 degrees, a device with the letters IFF (Identification Friend or Foe) that when illuminated by radar would advise that it was friendly aircraft thereby avoiding the waste of intercepting unidentified aircraft. We flight tested the aircraft for about an hour and then our flight returned, without incident, to Luzon.

However the delivery flight from Biak was not so fortunate. This flight consisted of Subtte. P.A. Mario Lopez Portillo and a American pilot. In fact, there were two American pilots: 2 Lt. Lee A. Houk, 311th FS, and Lt. A.Z. Harris of the 69th FS, both from the 58th FG; Lt. Houk was the formation leader. They encountered bad weather and on descending on instruments crashed into a mountain on July 21, 1945; both pilots were killed." SubTte. Lopez Portillo was probably flying 44-90149. Lt. Harris had separated from the formation and survived to notify both the American and Mexican Commands. The pilot that had gone to Biak reported that my flight leader, Tte. Espinosa Galvan, had gone down at sea because of fuel shortage on July 16, 1945, as reported by Lt. Gus T. Roberts of the 310th FS. Lt. Roberts was from the 58th FG and the formation leader of this flight. In this same flight was another Mexican pilot, SubTte. Praxedis Lopez Ramos, who returned safely.

Our operations officer, Capt.2/o. P.A. Pablo L. Rivas Martinez, went missing on July 19, 1945. Thus, our unit lost its best pilots who were in high command positions in the squadron. Capt. Rivas Martinez was flying 44-90058 and he was finally declared dead by Mexican officials on August 18, 1947, with the rank Major. His wingman, SubTte. P.A. Guillermo Garcia Ramos flying 44-333711, bailed out off the West New Guinea in bad weather. He was later rescued by Maj. Larry D. Dennis of the USAAF in a Vickers-built Catalina OA-10A.

SubTte. Mario Lopez Portillo was a young man with no bad habits, single. He had graduated from the Military Aviation School at Guadalajara (21 March 1944), Jalisco, did a pilot's course at the US Naval Base at Corpus Christie, Texas. Tte. Hector Espinosa Galvan came from the H. Colegio Militar, the Military Aviation School, and Corpus Christie, Received his wings on December 16, 1943. He was married with two kids, we called him 'Pinocho'.

Capt. Radames Gaxiola, our squadron commander later B.J.Gen. KIFA September 14, 1966 assigned me the task of pickup the personal effects of our friends to send them to their waves. We had hopes that Espinosa and Rivas Martinez had saved themselves by swimming to one of the many

islands, but our hopes were short lived.

Capt. Rivas Martinez had been a flight instructor at the Military Aviation School. He taught me to fly in 1941. Everybody called him 'Pablito'. He had received the Merito Militar (Military Merit) medal for saving an aircraft. On January 3, 1937, when his Fleet Model 10-32D trainer No.4 got in a stall. The instructor bailed out leaving Rivas Martinez who, using what he had learned in class, managed after many attempts to land the aircraft earning him this medal. But after the pilot bailed out, it changed the CG of the aircraft returning it to normal flight which "Pablito" using what he knew about flying landed it at Balbuena after three tries. Later, Capt. Rivas Martinez would survive an accident in a Ryan STM trainer No.1, which put him in the hospital with Cadet P.A. Romero Medilli.

The arrival of the new aircraft coincided with the end of the Luzon campaign. Later, we would do our reconn and bombing against the island of Formosa

The Fighter Sweeps

Here ends the account of Tte. Samano Pina, but not his combat experiences in the Pacific war. Of the four Fighter Sweeps that the 201st undertook to Formosa, he participated in two. The first one was flown on July 8, 1945, with nine other pilots in which the final mission reports reads as follows: "Four unidentified aircraft sighted on return N of Ryukyu island flying north at an altitude of 1000 ft. 'Jabber' leader lost them under the overcast. One Squadron of P-38's and one of P-51's sighted south of Formosa flying towards Luzon. One pilot reported a submarine."

On the second Fighter Sweep, flown the next day, he participated again with nine other pilots, but this time being led by Capt. 2/o. P.A. Pablo L. Rivas Martinez, the report mentions: "During the flight, they encountered numerous B-24, B-33 (sic), P-51, and P-38 planes en route north over the Southern part of Formosa. Two monoplanes seen at Haito Airdrome to the south of Takao. They observed two destroyers and seven vessels of large surface force which were anchored in Toko Bay and three hydroplanes alight in the same bay with all their necessary equipment. The leader of the flight did not attack the ships in Toko, Formosa, because his mission was only to attack aerial enemies."

One of the last mission that was flown by pilots of the 201st was on August 26, 1945, which the squadron recorded as follows: "Escort mission to a convoy in the North Sea of the Philippines. Results: All pilots of the 201st participated in this mission to escort a convoy from six o'clock in the morning until they were relieved by USAAF P-61 Black Widows at 1800 hours in the evening. This mission took place because it was feared there could be an attack of suicide aircraft based at Formosa."

Postscript

There are some biographical notes that should be mentioned about Tte. Samano Pina. During his training in the USA, he was involved in a accident near AAF Base Pocatello, Idaho, when he forced landed P-47D-28-RA s/n 42-29464. The accident report states: "Lt. Samano took off at 1345 hours on formation elementary high-altitude mission and, after completing the mission, the flight returned to the field. Due to a change in runways and an emergency landing, the flight

could not land for sometime. Lt. Samano had been on his main tank for several minutes with no indication that his fuel supply was going down, so he assumed that gauge was inoperative and switched to the auxiliary tank just before peeling off. Shortly after peel-off, the engine quit and he made a wheels-up landing north of the field. (Accident occurred on November 8, 1945). The aircraft received extensive damaged to the extend that it had to remain behind at Pocatello for repairs until January 1, 1945. The Mexican Squadron moved their training to Texas in late November 1945, due to the inclement weather of state of Idaho.

As mentioned before, after his returned from the war, Samano Pina was promoted and served in civil aviation for a short time. After his return to active duty, he served in other duties including commander of the 5/o. Grupo Aereo from 1960-1962. Later, he was chief of operations for the Base Aerea Militar No.1 (BAM: Military Air Base) from 1962 to 1965. In January 1963, he made a long-distant flight to Brazil in a Lockheed C-60 flying the director of PEMEX (Petroleos Mexicanos/Mexican Petroleum) for a government visit. From March to July 1965, he was the director of the Military Aviation School. His final posting was as commander of the "Escuadron Aereo de Transporte Pesados C-54" (Heavy Transport Squadron C-54) until his retirement in 1966.

Santiago A. Flores (SAFCH #588), PO Box 430910, San Ysidro, CA 921433, USA.

Combat Record of the 201st Mexican Fighter Squadron MEAF

Combat Mission Flown	96
Offensive Sorties Flown	85
Defensive Sorties Flown	6
Hours Combat	1966:15
Hours Flown Combat Zone	591:00
Hours Pre-Combat	281:00

Hours per Pilot (Average)	86:00
Total Hours Flown	2842:00
Bombs Dropped 1,000 lb (450 kg)	957
Bombs Dropped 500 lb (226 kg)	500
Total Rounds of 0.50 cal Expended	166,922
Aircraft Damaged in Combat	5
Pilots Killed in Action	0
Pilots Killed in Flying Accidents	4
Pilots Missing	1

Note: There is a discrepancy among the American and Mexican records on the type and amount of bombs dropped by the squadron. A translated copy of the summary of all the combat mission by the 201st submitted by Capt. 2/o. P.A. Amadeo Castro Almanza on March 12, 1946, to the American Embassy in Mexico shows the following types of bombs dropped by the unit: 1,000 lb 530 and 500 lb 500.

Sources and References

1. Biography of Amador Samano Pina, by Manuel Ruiz Romero (undated). Mexico City.
2. 201st Fighter Squadron Mexico, 58th Fighter Association Newsletter No.11, January 1993.
3. A Short History of the 201st Mexican Fighter Squadron of the Mexican Expeditionary Air Force, by Santiago A. Flores, SAFO Vol. 20, No.3 (79), October 1996.
4. USAAF Report of Aircraft Accident, dated 8 November 1944 of Samano, Amador P. 1st. Lt. MAF (via AFSA Kirtland AFB, New Mexico USA).
5. Hisotria Oficial de la Fuerza Aerea Expedicionaria Mexicana, by Tte. Col. E.M. Enrique Sandoval Castarrica, Secretaria de la Defensa Nacional, Mexico. 1946.
6. To Join the Allies, The Mexican Expeditionary (Air) Force, by Santiago A. Flores, Air Enthusiast #46, June/August 1992 (UK).
7. To Join the Allies, Round out Dept., by Santiago A. Flores. Air Enthusiast #73, January/February 1998.
8. The Mexican Expeditionary Air Force in World War II: The Organization, Training, and Operations of the 201st Squadron. A Research paper presented to the Research Dept. Air Command and Staff College (AU/ACSC/0609J/973) by Lt. Col. Jose G. Vega Rivera (Mexico), March 1997.
9. Resumen de los Accidentes Ocurridos a los C.C. Pilotos del Escuadron 201 de la Fuerza Aerea Expedicionaria Mexicana, copy of original document provide by Capt. 2/o. FAEEA (ret) Manuel Cervantez Ramos, Mexico D.F.
10. Liberacion de Filipinas, Campana del Lejano Oriente, by Tte. Col. Amador Samano Pina, Revista del Ejercito, Junio de 1957, Mexico D.F.

Paraguayan Military Hueys (Continued from page 85)

Aircraft	c/n	Serial	Owner	Previous identity	Fate
UH-1B	412	H-023	FAP	62-1892	To Chile 1991
UH-1B	711	H-024	FAP	62-12553	To Chile 1991
UH-1B	?	PR-H-003	DINAR	63-8611	
				LV-WMS	In storage
UH-1B	1157	PR-H-004	DINAR	64-14033	
				LV-WIX	In storage
UH-1B	426	PR-H-005	DINAR	62-1906	
				LV-WED	In storage
UH-1H	18003	H-029	FAP	Taiwan	W/O in 1998
UH-1H	18015	H-030	FAP	Taiwan	In service
UH-1H	18018	H-031	FAP	Taiwan	In service
UH-1H	18023	H-032	FAP	Taiwan	In service
UH-1H		H-033	FAP	Taiwan	tbd 2001
UH-1H		H-034	FAP	Taiwan	tbd 2001
UH-1H		H-035	FAP	Taiwan	tbd 2001
UH-1H		H-036	FAP	Taiwan	tbd 2001

Acknowledgements

The author would like to thank Lt.Col DEM Insaurralde, Commander of the Grupo Aereo de Helicopteros of the FAP for his kind permission to take pictures of the FAP helicopter fleet.

Luis Sapienza Fracchia, (SAFCH #1160), PO Box 2721, Asunción, Paraguay.

Photo captions (all photos by the author)

a. Bell UH-1B serial H-024 of the Grupo Aéreo de Helicópteros (GAH) of the FAP at Ñu-Guazú AFB in 1989.

b. Bell UH-1B serial PR-H-004 of the Dirección de Narcóticos (DINAR) at Asunción International Airport in 1996.

c. The three Bell UH-1Bs of the DINAR at Asunción International Airport in 1996.

d. Bell UH-1H serial H-032 of the GAH/FAP at Asunción International Airport in 2001.

Beriev MBR-2 Flying Boat

Victor Kulikov

Construction of the Aircraft

At the beginning of the 1930s, a considerable part of the Soviet naval aviation were aircraft of foreign firms - German Heinkel HD 55 and Dornier Wal and Italia Savoia S-62bis (MBR-4). A real necessity existed for the construction of an indigenous naval short-range reconnaissance, so a project of Gergyi Beriev, a young engineer from the naval department of the Central Design Bureau (Tsentrāl'noe Konstruktorskoe Buyro: TsKB), received approval. Beriev proposed a flying boat of wood construction that, at a time when metal construction was being introduced in aircraft construction, was a step back. Although the production of duralumin had already been mastered in the USSR by that time, it was still a new because metal was being used mainly for construction of land aircraft. Therefore, Beriev had no chance for serial production of naval aircraft of all-metal structure. An other argument in favour of the aircraft of the wood structure was the widely-developed repair base of naval aviation adopted maintaining wooden aircraft.

"Aircraft 25" (the designation given the future MBR-2) was built at the aircraft factory of Menzhiskiy in a short space of time and, by the autumn of 1931, it was almost ready. However, at that time the M-27 engine for which the flying boat was designed, had not completed official testing. Because of this, all work on the prototype MBR-2 was stopped. To get around this, Beriev decided to install the less-powerful, but safer, M-17 engine (a licence-built German BMW VI) on his aircraft.

By the end of 1931, assembly of the prototype was complete. The MBR-2 was a monoplane flying boat with a single engine fitted with a four-bladed propeller of rather smallish diameter (3,0 m) placed above the center section of the wing. The finished aircraft was disassembled, loaded on flat cars, and sent to the Black Sea Fleet for tests. On 3 May 1932, pilot B.L. Bukhgolts lifted the flying boat into the air for the first time. Official tests were a success and the Command of Naval Aviation recommended the MBR-2 for serial production. Later, the question about the serial production of the MBR-2 was discussed at a conference, in Moscow, of representatives from the aircraft industry and naval aviation. Against the serial production of Beriev's aircraft was the patriarch of the Soviet aircraft construction, Anfrei Tupolev. He recommended series production of his flying boat of all-metal structure. However, Tupolev's aircraft displayed unsatisfactory performance during tests and, as a result, neither aircraft was recommended for serial production.

To find a way out from this situation, Beriev decided to redesign his aircraft as a passenger variant and present it boat to the Civil Aviation Fleet. Meanwhile, a discussion of the development of naval aviation was discussed by the General Staff of the RKKA (Red Army) beginning on 1 March 1933. On 5 August of the same year, the question was discussed at a conference with the head of the Soviet State, Iosiph Stalin. Stalin gave his approval for the serial production of the MBR-2, thereby deciding the fate of Beriev's new aircraft.

Serial production of MBR-2 was undertaken at Aircraft Factory No 31 at Taganrog where an experimental design bureau for naval aircraft construction (Opytnoe Konstruk-

torskoe Buyro Morskogo Samoletostroenia: OKB MS) was established with G.M. Beriev at the head. At the end of 1933, the first production aircraft were received by naval aviation. Thanks to high seaworthiness (the aircraft could overcome waves of 0,7 meters high), and cheapness and simplicity of construction, the MBR-2 was produced in large numbers and it became the work horse of naval aviation of the USSR for many years to come. Serial output of MBR-2 and its civil variant MP1 (Morskoi Passazhirskiy - pervyi: Sea Passenger - First) continued until 1940. A total of about 1400 aircraft of different modifications were built. This MBR-2 ended the dependence of Soviet naval aviation on foreign seaplanes.

The peculiarity of MBR-2 shape which had two steps was a large (up to 35 degrees) transverse deadrise on the front step provided good seaworthiness and allowed a "soft" water landing at touch-down speeds up to 110 km/h. The hull had a deeply concave bottom and with sharp bilges. Such a shape of the bottom was convenient for landing though not optimum for take off. However, the chosen cross section of the boat with large deadrise didn't allow the MBR-2 to taxi out of the water onto the slip of the seadrome. To get the aircraft out of the water, it was necessary for technical personnel to place a special wheel-cart under bottom of the boat.

The hull was covered with linen and aircraft dope. In service, a defect was revealed: The linen often came detached from the plywood covering on concave surface of the bottom especially on the front step. Water accumulated between the plywood and linen and this caused rotting of wood structure of the aircraft. During repair, the plywood planking was changed, but it was not covered with linen but covered with special water-resisting varnish (kuzbasslak). For winter service, the flying boat was placed on ski under-carriage of pyramidal shape. The crew of the MBR-2 consisted of three men: A commander, navigator who was a;sp the gunner/bomber, and mechanic. All members of the crew were *statioed in two open cockpits at the nose of aircraft, the navigator in the front cockpit while the pilot and mechanic sat in front of the leading edge of the wing. If the aircraft were attacked, the mechanic made his way along a passage under the *centerwing section to the back turret. The offensive armament of the MBR-2 consisted of 68 externally-carried bombs with total weight 500 kg (in overload, 600 kg). The defence armament consisted of two coaxial guns DA-2 (Degtyarev Aviatsionnyi - vtoroi: Degtyarev Aviation - Second) in open turrets at the nose and mid (behind the propeller) part of fuselage.

Until 1935, the flying qualities of MBR-2 with the M-17 engine M-17 were less than satisfactory. Then the more powerful AM-34 engine was installed on the aircraft. This engine came in two variants: with supercharger (AM-34 NB) and without (AM-34B). The MBR-2 with the AM34 engine differed outwardly by the shape of vertical tail and closed cockpits for the pilot and rear gunner. This improved the aerodynamic form of the aircraft and its flying qualities with the AM-34 NB engine were improved: Speed at 5000 m reached 275 km/h (without bomb load). The pilot's view on this aircraft was improved thanks to his higher seat. The armament was also strengthened. Instead of coaxial

machine-guns DA-2, rapid-firing machine-guns ShKAS (Shpitalnyi, Komaritskiy - Aviatsonnyi Skorostrelnyi) of 7,62 mm calibre were mounted.

In 1937, one of the MBR-2 was equipped with a M103 engine (licence-built Hispano Suiza 12 Ybrs)) with metal two-pitch propeller. This aircraft had closed cockpits and metal wing torsion box instead of wood. Speed of the modified aircraft increased to 295 km/h. However, because of the absence of a Soviet version of this engine, it was not accepted for use. A modified MBR-2 with a M-34 FN engine suffered the same fate.

For the Civil Aviation Fleet, several modifications of the MBR-2 were created: the MP-1 and MP-1T, both with M-17b engine, and the MP-1bis with an AM-34 engine. In 1934, almost at the same time as the appearance of the first series MBR-2, the KB (Design Bureau) of Beriev prepared a passenger modification of the aircraft for series production. Without armament, these aircraft possessed less aerodynamic drag and had a better performance compared to the combat version. The passenger variant had a two-man crew, carried six passengers in a comfortable cabin under the center-section of the wing, and had a payload of 540 kg. The MP-1T transport version did not require any alternation of the aircraft. The armament was removed, the floor strengthened, and the aircraft was equipped with primitive devices for transport duties. This version carried up to 500 kg of cargo. As a rule, transport aircraft were combat aircraft with expired life which were given a general maintenance. The MP-1bis, with an AM34NB engine AM34NB which had centrifugal blower, was created in 1936 as a modified variant of the MBR-2. Series MP-1bis seaplanes were also produced with a non-altitude AM-34B engine in six-passenger and transport variants and were widely used in the USSR. Thanks to them, remote districts of Siberia, the Far East, and the Arctic were developed. In 1936, one of the series MBR-2 was re-equipped as a staff eight-seater aircraft with a range of 1500 km and flying weight of 5185 kg.

A specially re-equipped passenger aircraft MP-1 with a M-34M engine was used in a propaganda flight to establishment an international women's records. A crew consisting of pilot Polina Osipenko, navigator Marina Raskova, and flight-technic Vera Lomako established three international altitude records: On 22 May 1937 the ascended to an altitude of 8864 meters without load. On 26 May with 500 kg load to 7605 meters and with 1000 kg to 7009 m. With the same aircraft, the same women crew, 2 on July 1938 made a record-setting long-distance flight from the Black Sea to the White (Beloye) Sea on the route Sevastopol-Kiev-Arkhangelsk a total distance of 2416 km in 10 hours 33 minutes with an average speed of 228 km/h.

Section II. Combat Service of the MBR-2

Stalin's Secret Weapon

At the beginning of the war, MBR-2s were the backbone of the Red navy's reconnaissance aviation. They were flown by the most experienced pilots who had experience in night flying and flight in severe weather conditions.

The MBR-2 participated in an interesting experience of experiment in the distance control of weapon delivery. Before the war, Soviet military naval aviation took into its inventory a specially modified MBR-2VU (Volnovoe Upravlenie: wave

control). An operator on the aircraft used radio control to drive a torpedo boat to its target. The crew of MBR-2VU consisted of five persons and its flying weight was 4580 kg. Several divisions of distance-controlled torpedo boats with their aircraft-driver MBR-2VU were formed in the Baltic-Sea, Black-Sea, and Pacific Fleets. However, during the war this secret weapon was not used to its full capability. As there were no escort fighters for the MBR-2VU, the headquarters of the Baltic Fleet ordered all special equipment taken out of the boats so they could be used in the ordinary way. In the Black-Sea Fleet, in 1943, they tried twice to use boats with distance control to attack German ships which stood at their moorings in the ports Anapa and Kamysh-Burun. However, both attacks were a failure. In one case, the boat, which had already penetrated into port, collided with some obstacle and blew up. In the other case, the operator failed to cope with a narrow and twisted channel and blew up the boat himself.

Operations with the Baltic Fleet

Three days before the surprise attack of Germany on the Soviet Union, the Baltic Fleet was put on combat alert No 2 and the MBR-2s made reconnaissance of territorial waters. These aircraft were the first to met the enemy on 22 June. At half-past three in the morning, two aircraft from the 44th Squadron found a group of unknown ships in the Gulf of Finland. Descending to 600 meters, the aircraft attacked enemy ships busy laying mine. However, the crews had to break off the attack of heavy anti-aircraft fire from ships.

The great losses suffered by the Soviet Air Forces (VoennoVozdushnye Sily: VVS) in the first few days of the war made necessary the use aircraft of naval aviation for the attacks of Wehrmacht mechanized columns. Pilots of the 41st, 42nd, 43rd, and 44th detached squadrons from the staff of the naval aviation of the Baltic Fleet carried out bombing attacks on the advancing German troops. They dropped bombs from low-levels and machine gunned columns on highway and concentrations of enemy near crossings. The use of low-speed MBR-2 in daylight without escort fighters led to heavy losses. Nevertheless, Soviet headquarters sent the majority of bombers and torpedo bombers of the Baltic Fleet to fight with land units of Wehrmacht. After 11 July, the MBR-2 did not carry out any sea-reconnaissance flights. To reduce losses from enemy anti-aircraft fire and fighters, from the beginning of July 1941, the MBR-2 flying boats were used as night bombers. These tasks were performed mainly by the crews from the staff of the 15th ORAP (Otdelnyi Razvedyvatelnyi Avia Polk: Detached Reconnaissance Aviation Regiment) of the Baltic Fleet who had experience in night flying before the war. With the beginning of long nights and the shortening distance of the front line from the airfields, the pilots of the regiment managed to make two or three flights each night. During July-August 1941, the crews of the 15th ORAP made more than 300 flights in defence of Leningrad. At the beginning of August, the main base of the Baltic Fleet, Tallin, found itself under the threat of encirclement. Pilots of the 44th Squadron took part in its defence.

For their design purpose as sea reconnaissance and anti-submarine aircraft, MBR-2 were used, in summer 1941, episodically. Sea reconnaissance was performed by MBR-2 from the 15th Squadron of the Moonzond Air Group and from the 81st Squadron. Almost every flight on reconnais-

sance was accompanied by losses. For example, on 1 July, Finnish Fokker D.XXIs shot down a pair of MBR-2 near the island of Gogland. On 6 July, two MBR-2 from the staff of the 15th Squadron were shot down by four Fokker D.XXI. However, there were rare exceptions: On 3 August, a pair of MBR-2 was attacked above the Gulf of Finland by two German Messerschmitt Bf 110s. In a resulting fight, one German aircraft was shot down while the other was so damaged that it withdrew from the fight. Both MBR-2 returned safely to their airfield.

The MBR-2, as anti-submarine aeroplanes, protected convoys on the routes Hanko-Tallin, Moonsoond-Tallin, and Tallin-Leningrad. The range of search was 50-70 miles. Lack of any technical means of detecting submarines decreased the efficiency of the search. However, visual search allowed MBR-2 crews to spot submarines 22 times. The MBR-2 had no efficient means to attack submarines, so attacks of the Soviet flying boats had mainly of a "frightening" character. The most successful was the attack by two MBR-2 on a German submarine on 9 July west of the island of Bengshber. Four FAB-50 bombs (weight 50 kg) were dropped, one of which blew up near the submarine. The crews of the aircraft observed a grease spot of diesel fuel and different objects. Most likely a small bomb with weight of 50 kg caused only slight damage to the submarine.

The MBR-2 aircraft from the Moonzoond Aviation Group were used as mine sweepers. The enemy widely used influence bottom mines which couldn't be destroyed because of lack of electromagnetic mine sweepers in the Baltic Fleet. To destroy these mines, the MBR-2, using data from shore posts, bombed places where mines fell either causing their detonation or putting out of action the mine fuse.

During July-August 1941, the Baltic Fleet lost 95 MBR-2 as the result of their combat use. These losses were 63% from total number of the MBR-2 which were on hand at the beginning of the war on Baltic Fleet (151 MBR-2). The 15th ORAP alone, up to the end of 1941, lost 40 crews and 75 MBR-2. By the autumn of 1941, with the loss of the Baltic Republics (Lithuania, Latvia, and Estonia) and the Gulf of Finland, the career of the MBR-2 as a naval reconnaissance aircraft with the Baltic Fleet finished. But, as night bomber, it was used there until 1943. The flying boats struck blows on airfields and railway stations of the enemy. After January of 1942, the MBR-2 began to be used as a transport aircraft for dropping supplies to encircled troops on the islands Gogland and Bolshoyi Tyurbes. In 1943, the use of the MBR-2 in the Baltic Sea was finished. Crews of the flying boats changed seats to Petlyakov Pe-2 and lend-lease Douglas A-20 Boston.

Operations with the Black Sea Fleet

Naval aviation of the Black Sea Fleet (BSF) before the war numbered 140 MBR-2. With the beginning of the war, crews of the flying boats escorted ships mining enemy communications and carried out aerial reconnaissance of the western part of the Black Sea. In July 1941, the MBR-2 from the 116th and 119 ORAP struck blows at the Rumanian Fleet and at shore objective along the Danube. At the beginning of August, when German troops attacked Odessa, crews of MBR-2 began to take part in raids on Wehrmacht mechanized columns. With loss of its bases at Nikolaev and Kherson, the naval aviation unit of the Black Sea Fleet moved to airfields

on the Crimea peninsula. MBR-2 carried out aerial spotting for shipboard artillery of the Black Sea Fleet. Losses of MBR-2 in the Baltic were considerable and forced naval headquarters to use MBR-2 as a night bomber. The main object of the night raids became enemy's airfields in Saki and Sarabuz where Luftwaffe torpedo bombers and bombers were based.

By the spring of 1942, the situation on the Black Sea had seriously changed when flotillas of German and Italian torpedo boats and submarines began to appear. After the fall of Sevastopol, the enemy began to use ships to transport troops and cargo. In these conditions, the MBR-2 was used according to its designed purpose for naval reconnaissance and bomber. IN *additon, the MBR-2 took part in all offensive operations of the ships of the Black Sea Fleet. At the end 1942, the 30th German flotilla of submarines became an important object of attention for the MBR-2. In December of 1942, the crew of an MBR-2 of the 119th ORAP detected submarine U9, which was attacked by it and other crews of the regiment. The enemy submarine to its base on 7 January 1943 with considerable damages. The MBR-2 were used also as a search-and-rescue aeroplane. The crews of the flying boats found and picked up sailors from sinking ships and crews of aircraft shot down over the sea. On the Black, Sea MBR-2 were used till September 1944 when combat actions in this district stopped.

Operations with the Northern Fleet

Naval aviation of the Northern Fleet numbered 54 MBR-2 before the war. They were with the 118th ORAP and 49th Detached Squadron. Flying boats were mainly used against submarines and for escorting naval convoys. On 4 September 1941, a pair of MBR-2 from the 49th Squadron detected, to the west of Cape Kanin Nos, a German submarine and attacked it. The oil slick which appeared after the submarine dived indicated some damage. Although the Germans suffered no submarine losses, the patrols of the MBR-2 limited their activity in the White Sea. Since 1941, the MBR-2 took part in the withdrawal of ice-breakers from Arctic at the end of navigation season. Ice-breakers played a big role in ensuring the work of the strategic Northern Sea Way and a great deal of importance was given to their protection.

On 21 August 1941, the first Allied convoy came to Northern Russia. From this time on, the work of the MBR-2 in escorting convoys and guarding them from German submarines began. In the summer of 1942, German submarines became very active near Novaya Zemlya. The battleship "Admiral Scheer" penetrated into the Kara Sea and "played the master" there. In these conditions, the headquarters of the Northern Fleet adopted a number of measures and, in particular, organized the 3rd Aviation Group, the foundation of which were seventeen MBR-2. From September 1942, MBR-2 began combat activities in the conditions of Arctic where, earlier, only polar pilots flew. In 1943-1944, the fight on communications in the Kara Sea sharpened: German submarines began to use tactics of "wolf packs" while German Blohm und Voss BV 138 flying boats regularly made aerial reconnaissance right up to straight of Vilmitskyi. The difference in combat performance of the MBR-2 and its enemy was very great and the outdated aircraft were consequently replaced by American Consolidated PBY Catalina

which were delivered to the USSR by lend-lease. Left to the MBR-2 was aerial and ice reconnaissance, escort of convoy, and search of submarines in the White Sea. From then until the end of the war, the crews of the MBR-2 did not put down to their account any German submarine.

The War in the Far East

At the beginning of 1945, the MBR-2 was taken off the combat inventory of all the fleets except for the Pacific Ocean Fleet. Here, 216 MBR-2 formed the basis of the fleet's reconnaissance aviation. These MBR-2 took part in the fight with Japan where they were used as bombers and transport aeroplanes. The experience of the flying boat crews allowed them to fly in the bad weather conditions typical of this region. In August of 1945, the MBR-2 of the 115th ORAP took part in night raid on the Korean port of Juki and provided support for a landing at the port of Seisin. The MBR-2 from the 48th Detached Naval Regiment for long-range reconnaissance carried out missions over the ports of Toro, Esutoro, and Usiro in the southern part of the island of Sakhalin. Crews of this regiment made detailed photography of these ports since headquarters had no large scale maps of this region. Later, crews of the 48th Regiment made night bombing attacks in support of landing at the south-Sakhalin ports. The MBR-2 suffered minimal losses in the war with Japan because Soviet had complete air superiority. Japanese anti-aircraft artillery was suppressed by attacks by aircraft and bombers. During the entire combat, naval aviation of the Pacific Fleet lost only four MBR-2. The war with Japan became the last in the biography of the MBR-2.

Conclusions

Created at the beginning of 1930s, the flying boat MBR-2 had a simple wood structure and not a very impressive flying performance. Participation in the Winter War with Finland showed that the aeroplane was already obsolete and that it had insufficient speed and weak armament. However, there was no available substitute so the MBR-2 withstood all the difficulties of the military service during WWII. The aircraft became the real "working horse" of Soviet naval aviation. The MBR-2 was called upon to fulfil tasks far removed from naval reconnaissance: attack land troops, drop supplies to encircled units, and take part in transportation. It fought throughout the Great Patriotic War and finished its combat career in the war with Japan.

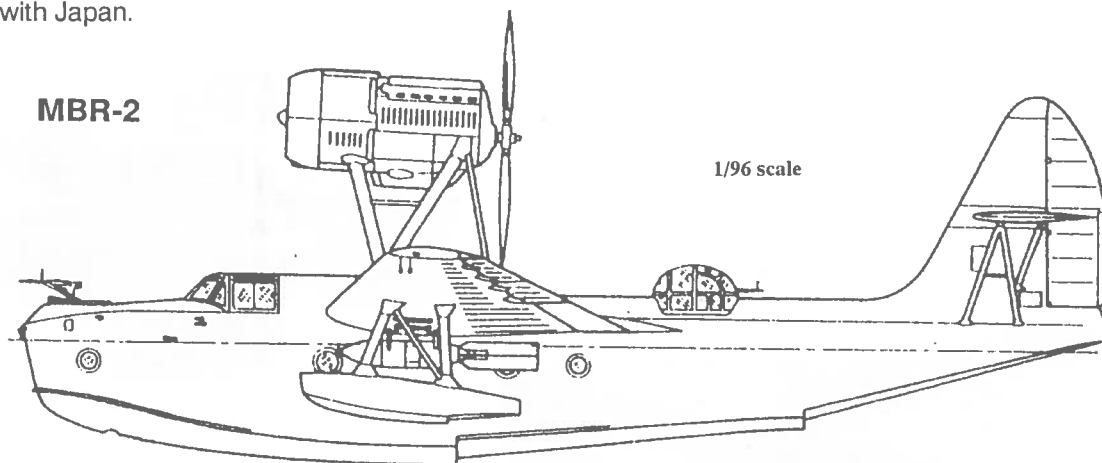
At the present time only one example of the MBR-2 remains. It is exhibited at the museum of the Northern Fleet in Severomorsk.

Photo Captions (All photos via the author)

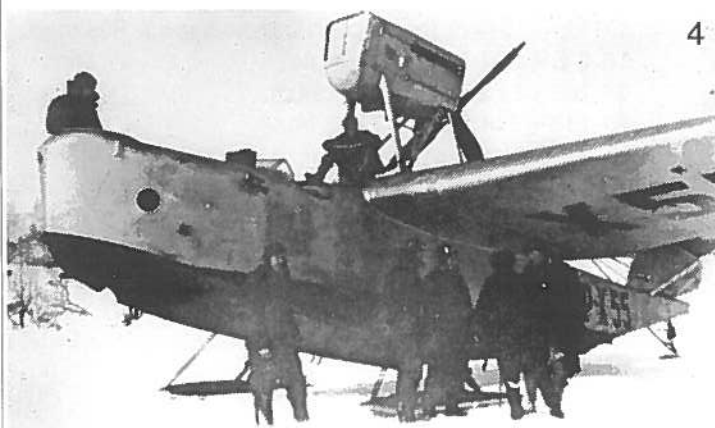
1. Beriev (Beriashvili) Georgii Mikhailovich 1903-1979.
2. First prototype with M-17 engine.
3. Power plant of MBR-2: engine M-17 equipped with four-bladed propeller.
4. MBR-2 with engine M-17 on ski undercarriage.
5. Civil variant of MBR-2 passenger seaplane MP1. Black Sea, Yalta, 5.VI.1937.
- 6,7,8. Experimental MBR-2 with engine AM-34 during official tests, 1935.
9. Flying boat MP-1bis with civil registration number "SSSR Zh-3". Black Sea.
10. Examination of MBR-2 M34 before the flight. The end of 1930s.
11. MBR-2 from the staff of naval aviation of Baltic Fleet.
12. MBR-2 M-17 with ski undercarriage. Northern Fleet.
13. In the cockpit of MBR-2 M-34.
14. Experimental MBR-2 created for limit load factor tests. Test instrument is on the leading edge.
15. Women's crew (from the right to the left): Lomako, Osipenko and Raskova and their MBR-2 before the flight from Sevastopol to Arkhangelsk on 22 May 1937.
16. The commander of women's crew Lieutenant Polina Osipenko.
17. Navigator of the women's crew Marina Raskova.
18. MBR-2 M-17 crew in flight.
19. MBR-2 captured by Finnish.
20. MBR-2 at a Baltic Fleet base.
21. After a combat flight.
- 22,23. Loading bombs and rockets before a flight. Black Sea Fleet, Summer 1943.
24. MBR-2 before a flight. The North Fleet, September 1941.

Victor Kulikov, (SAFCH #1573), PO Box 59, 129515 Moscow, Russia.

[Ed: The 1/72-scale Avia kit of the MBR-2 has been receiving rave reviews - and it comes with decals for 14 Soviet and one Finnish a/c. Sounds like a must for the modeler.]



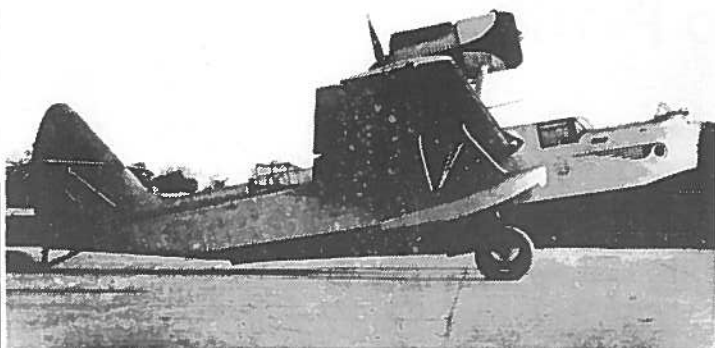
Enlarged from a drawing in Letectvi+Kosmonautika #23 1987



6



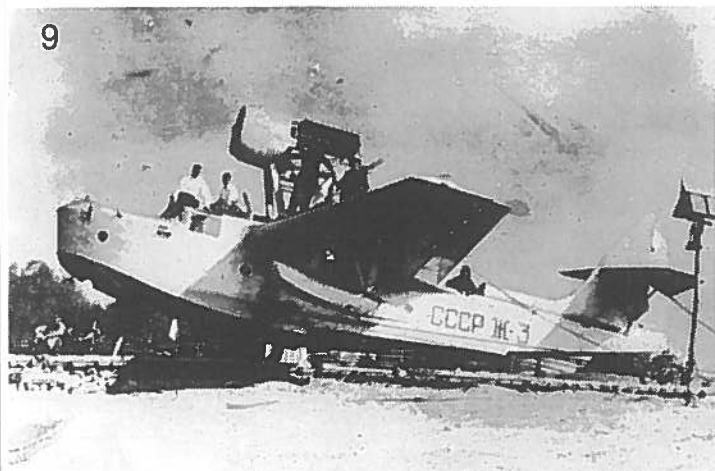
7



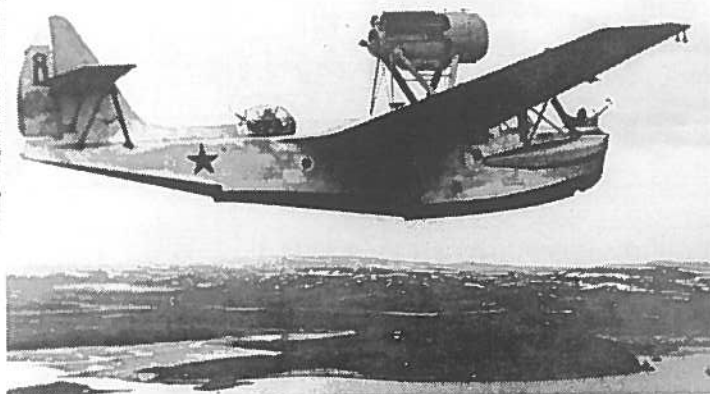
8



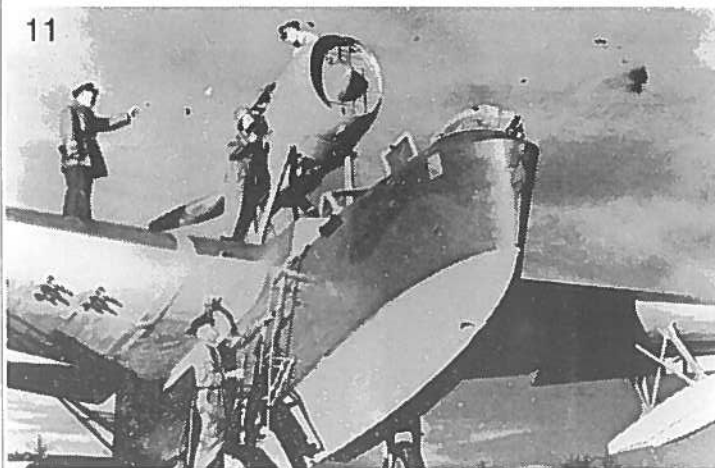
9



10



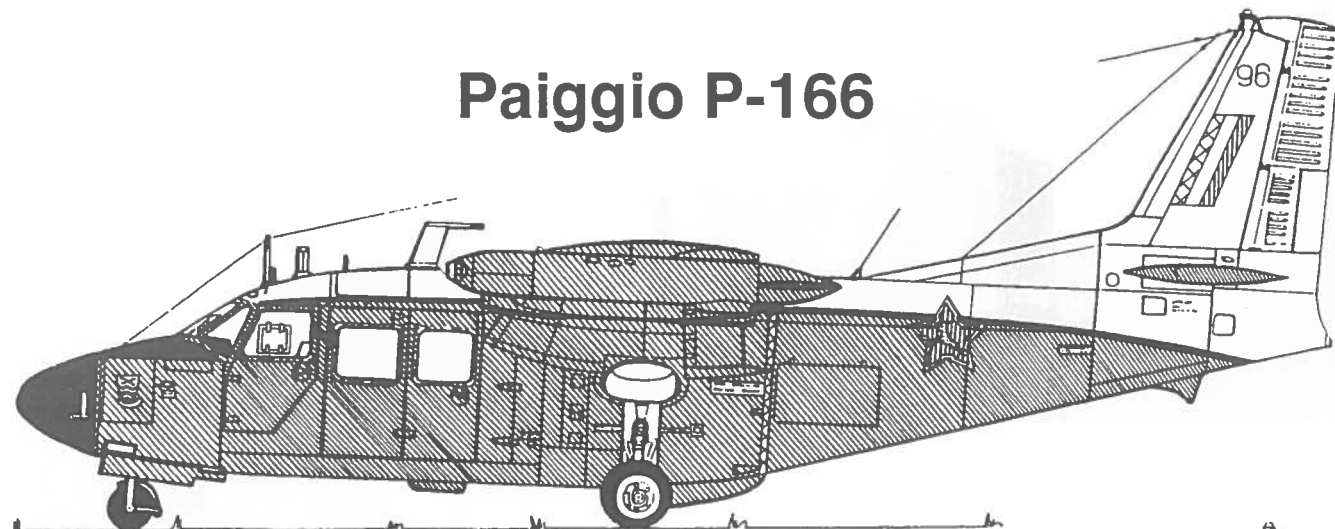
11



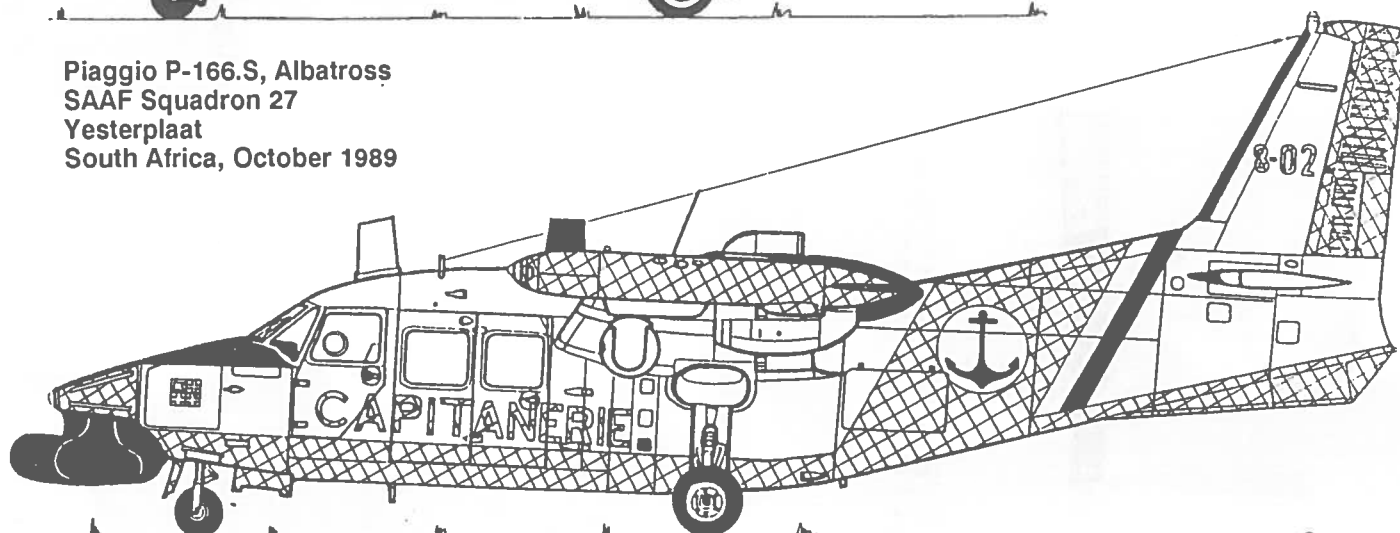
12



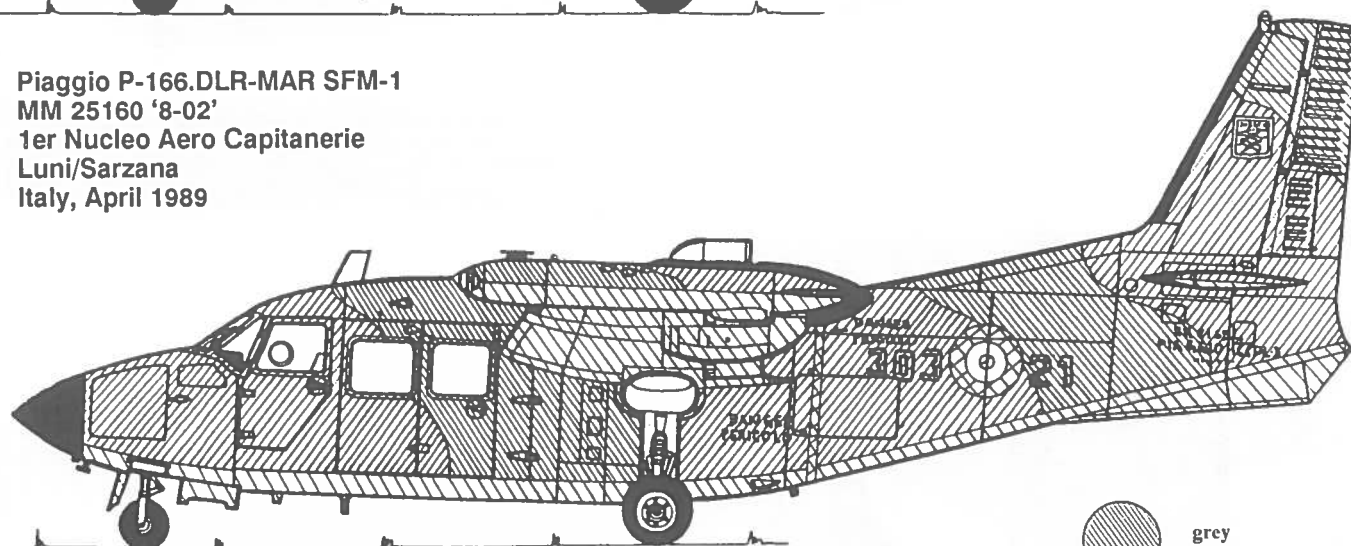
Paiggio P-166



Piaggio P-166.S, Albatross
SAAF Squadron 27
Yesterplaat
South Africa, October 1989



Piaggio P-166.DLR-MAR SFM-1
MM 25160 '8-02'
1er Nucleo Aero Capitanerie
Luni/Sarzana
Italy, April 1989



Piaggio P-166.DL-3
303^e Autonomous Squadron
Italy, 1990

Hubert Cance (SAFCH #809)
56 Bd. E. Lintilhac
15000 Aurillac
France



red



brown



green



dark green



grey



light grey



dayglo red

The South African Aviation Corps in SW Africa, 1915

Andy Thomas

The beginning of the First World War saw British Imperial forces engaging the Germans across the globe, with some of the campaigns being more akin to 19th Century colonial wars than the mass slaughter that will occur later in France. During the so called "scramble for Africa" in the latter years of the 19th Century, Imperial Germany claimed several territories on the Continent as part of its expanding Empire. The first of these colonies to be founded being in South West Africa (now Namibia) in 1883 in an area rich in mineral wealth. An 1890 agreement between Britain and Germany recognized German sovereignty over German South West Africa which encompassed an area half as large again as Germany itself. On its southern border lay the Union of South Africa whilst to the east lay the British Protectorate of Bechuanaland. With the outbreak of war came a desire to occupy and neutralize Germany's overseas possessions, particularly where they could act as bases for naval raiders. The colony of German South West Africa became the responsibility of the small Union Defence Force in South Africa, and accordingly Generals Smuts and Botha immediately began laying their plans.

The German colony was, however, naturally fortified with the rugged Atlantic coast being flanked by the barren Namib desert whilst to the south and east lay the arid wastes of the Kalahari. Thus the small but well-equipped and highly-trained German force of some 2000 men under Col Franke faced the coming conflict with confidence. They also had air cover in the form of two aircraft: an Aviatik and a Pfalz which had been delivered for exhibition flights before the war. In the event, they saw little use.

The Union Expeditionary Force began operations against German South West Africa in September 1914, but were without the benefit of any kind of air support. However, the seeds of a South African air arm had been sown in 1913 when ten officers had undergone some flying training at Kimberley under a Union Government contract with Paterson Aviation Syndicate Ltd. Six of these officers - Lts van der Spuy, Wallace, Creed, Emmett, Turner, and Williams - were then selected for further training with the RFC in England. They began training at Farnborough on April 25 1914 and three months later were taken on RFC strength. Following the outbreak of war in August, there arose an urgent need for pilots and, by the end of October, five of the South Africans were posted to units in France. However, in November, the five led by Capt G P Wallace (the most senior of the South African pilots) were recalled to England and tasked with forming a flying unit for service in German South West Africa - a daunting task. Two of them, Lts Turner and Emmett, left immediately for the Union. Turner was tasked with recruiting 75 personnel for the planned South African Aviation Corps and Emmett was to prepare an airfield for use at Walvis Bay. For use in the tropics, the metal-framed Henri Farman F 27 'pusher' was deemed most suitable and the Admiralty promised to supply some for South African use. The first F 27 was handed over in January 1915, two more during March, and a final two on May 15.

In the meantime, Wallace had recruited 26 mechanics, some of whom were transferred from the RNAS and these left

by sea on March 15 with transport and stores. Others were found by Turner in the Union, many from amongst specialist technicians in the goldfields which proved a rich recruiting ground; the first of these artisans to be recruited was Air Mech H.B. Tighe. By February 1915, a ground-instruction school had been set up in the Drill Hall in Cape Town under the pioneer aviator Sydney Vine. He had available two Jeannin monoplanes which had been captured at Duala by the British forces and a Patterson biplane. Capt Wallace and the other two pilots with eight mechanics and the remaining stores left England on April 3. They also took with them the aircraft - three Farman F 27s and two BE 2cs handed over by the Admiralty - though two of the Farmans were damaged during the voyage.

Action against the German colony began in September 1914 when South African troops, in three main columns under overall command of Lt Gen Jan Christian Smuts, invaded. Col P.B. Beves' element landed at Luderitz on Sep 18 and quickly established themselves whilst Brig Lukin's force crossed the southern border at Port Nolloth and moved north. The third column under Lt Col S.F. Maritz assembled at Uppington before moving off north toward Keetmanshop some 150 miles from the border. The overall aims were to neutralize the colony's potential use by surface raiders and to capture the wireless station at Windhoek. By April 1915, the southern columns were well into German territory in spite of the rugged and inhospitable terrain and, on the 14th, Smuts arrived at Kalkfontein to coordinate a further advance of the columns. He finally brought an elusive foe to action at Gibeon on April 27 where in a brisk action the German force was routed bringing the campaign in the southern part of the colony to an end. Smuts' force then dispersed, though some units were shipped around to Walvis Bay to join the Union's northern force under Gen Louis Botha.

This force had landed Walvis Bay on Christmas Day 1914 and initially secured its bridgehead and logistics in preparation for a move forward. Botha assumed command in February 1915 and under him the force began to move inland to the north east. By late April a reconnaissance unit was pressing on Ebony some 80 miles inland where they encountered a strong German force and withdrew to Trekkopjies. The Germans used one of their aircraft to reconnoiter the Union positions before advancing and being repulsed, largely thanks to a gallant action by RNAS armoured cars.

On April 30, a few days after this action, the ship carrying the aircraft arrived at Walvis Bay and on May 6 the South African Aviation Corps became operational under the now Maj Wallace. On that same day, Botha took the town of Karibib and a week later Windhoek, the capital, fell. Assembly and repair of the aircraft took some time, however, and one of the BE2s, No 963, was damaged on a test flight and thus took no part in the campaign. Botha's rapid advance had, however, outstripped his supply lines so the advance was halted to consolidate the gains and to build up supplies for the next phase north east from Karibib.

After the fall of Karibib, an advanced party from the SAAC moved up to make the airstrip there serviceable and soon afterwards several aircraft moved up. After eight months of

effort, the embryonic air arm was at last to enter the campaign for which it had been formed. The Aviation Corps' first reconnaissance was flown by Lt van der Spuy in a Farman on May 28; his report stated that "few of the enemy were left in Omaruru and that there was evidence that full arrangements had been made to abandon the place." A delighted Botha said to the pilot that "for weeks I haven't known the whereabouts of Franke. Now I can see for hundreds of miles". Soon after this significant event, two new Farmans arrived from England and work to assemble and test them continued round the clock.

The advance against Franke's forces resumed on June 19, initially occupying Omaruru without opposition as the advance then effectively became a pursuit. Wallace took an air detachment to Omaruru to establish a forward base on a former enemy airstrip. Three Farmans were moved up and they made five reconnaissances of the Kalkfeld area which showed the signs of an imminent evacuation. On the 24th, Wallace reced the settlement prior to the SAACs first bombing attack

before a planned, infantry attack. However he saw no sign of the enemy in the camp or in the surrounding hills, though he did spot the advance cavalry patrols of Brig Manie Botha's column who laid out ground markings to identify themselves.

Over the next few days, further reconnaissances were flown and during one of them Capt Creed flew a total distance of 270 miles, the longest of the short air campaign. By the beginning of July, it became obvious to the German commander that further resistance was useless as Botha's columns followed his moves into the interior. An Armistice was declared on the 6th and, at Otavi on July 9, Col Franke unconditionally surrendered all German forces in South West Africa which then fell under South African control until independence as Namibia in 1990.

Although arriving only in time for the final acts of the northern campaign, the South African Aviation Corps had more than proved its worth acting as the eyes of the wide-ranging cavalry units. The metal-framed Farmans too came through the campaign well in spite of the oppressively hot climate.

Following the successful conclusion of the campaign, the SAAC returned to Cape Town where it was demobilized although a small cadre, with the SAAC title, remained in existence at Cape Town for ground training. This tiny element was not officially disbanded until Nov 30 1921 under authority of General Order 6226.

After the successful conclusion of the campaign, most of the SAAC's officers soon returned to England and shortly afterwards they were followed by 119 NCOs and other ranks. On October 8 at Farnborough, the ground party was reunited with the original officers and some others under Maj Wallace (who received the DSO for his part in the SW Africa campaign) as No 26 (South African) Squadron, RFC. On December 23, this unit embarked for East Africa where it provided the air support for the Imperial forces in their long campaign in German East Africa. However, that is another story.

Andy Thomas, Wynyard House, 6 Boston Road, Heckington, Lincs. NG34 9JE, England.

Piper PA-18 Ecuadorian Army Service

Jorge Delgado P.

Since the PA-18 had its genesis in the Piper J-3, the airplane was easy and fun to fly and was used in many applications including aerial mapping, crop dusting, glider towing, and flight training. The armed forces of several countries have used it both for training and as a utility airplane. The best example of this is the Israeli Air Force who still uses it as a primary trainer at their air academy. The Ecuadorian Army chose the PA-18 because its low maintenance costs made it an ideal trainer for their cadet pilots. The Army purchased three Piper PA-18 for their flying school. Two of these were written off in training accidents, one at the city of Guayaquil and the other at Quevedo. The remaining one was still in fair condition when it was sold to a private owner.

On Friday 20 October 1972, Army PA-18 #18250 under the command of Tnte. Manuel Cortez Landazuri was on a training flight to the facilities of the Batallon del Suburbio. Although the back seat was designed for one person, he was carrying two military policemen, Mario Vivanco Guerrero and William Zurita Tirado. As part of the normal training pilots had drop messages to the Batallon practicing what they would have to do in a combat situation. It was during one of these practices that the motor of the plane began to cough and finally come to a stop. Because he was flying at only 500 feet, the pilot opted to make an emergency landing

on a street that ended in a large open space. However, because of the extra weight in the back seat, the plane could not make it safely into such a closed space. The landing gear caught on some telephone lines and the plane landed nose first into the mud. It ended up in a vertical position with the motor in the cockpit.

People who witnessed the accident ran to help the crew who were momentarily stunned by the impact. The fuel tanks were broken in the crash and gasoline was leaking into the cockpit. In their effort to extract the crew, they shook the wings causing the gasoline to fall onto the red-hot cylinders of the engine catching fire almost immediately.

The occupants of the back seat suffered burns, fractures, and bruises, but they were pulled out of the wreckage alive. The pilot, whose legs were trapped by the engine, died before the fire could be put out.

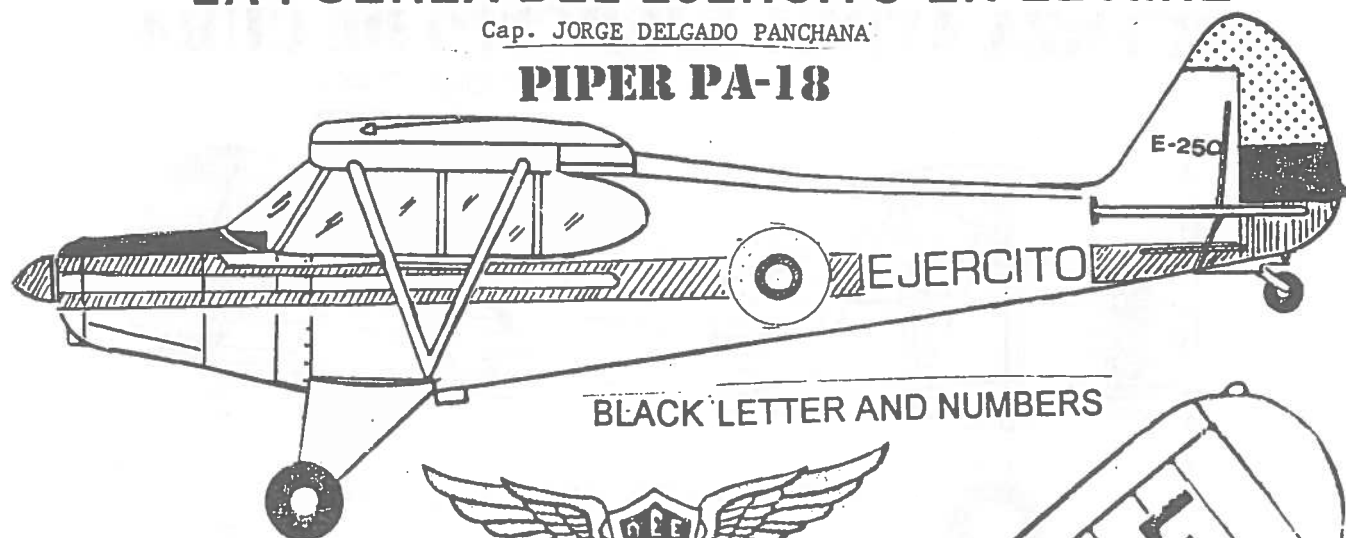
The crash of #18250 marked the end of the short but brilliant career of the PA-18 with the Ecuadorian Army Flying Corp who then procured new equipment in the form of the Cessna 172, 206, and T-41 Mescalero that still serve today.

Jorge Delgado P. (SAFCH #862), PO Box 2207 - UR-DESA, Guaycquil, Ecuador.

"LA FUERZA DEL EJERCITO EN EL AIRE"

Cap. JORGE DELGADO PANCHANA

PIPER PA-18



BLACK LETTER AND NUMBERS



FLAT BLACK



YELLOW



BLUE



RED



RED TOMATOE



MARKINGS OPOSITE UNDER

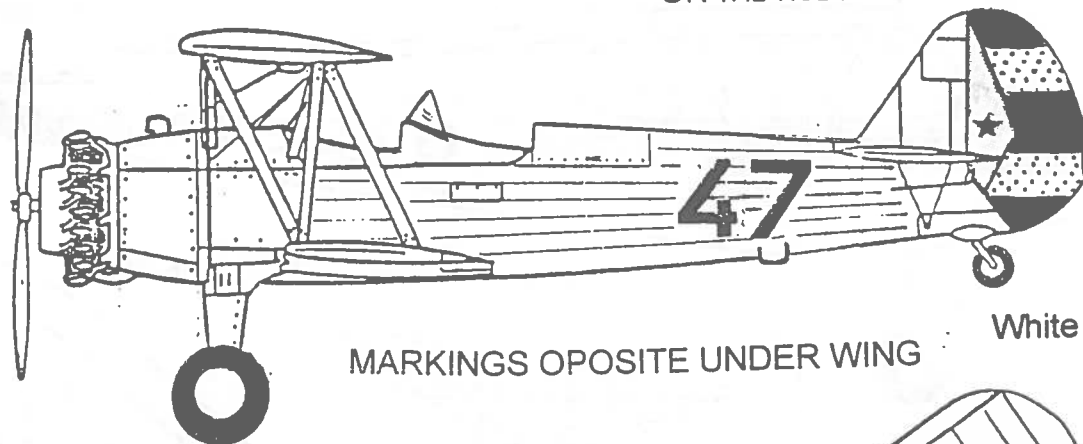
ENTIRE AIRCRAFT WHITE

SERVICIOS AEREOS DEL EJERCITO

Stearman PT-17





FUERZA AEREA EJERCITO DE CUBA

NATIONAL FLAG
ON THE RUDDER

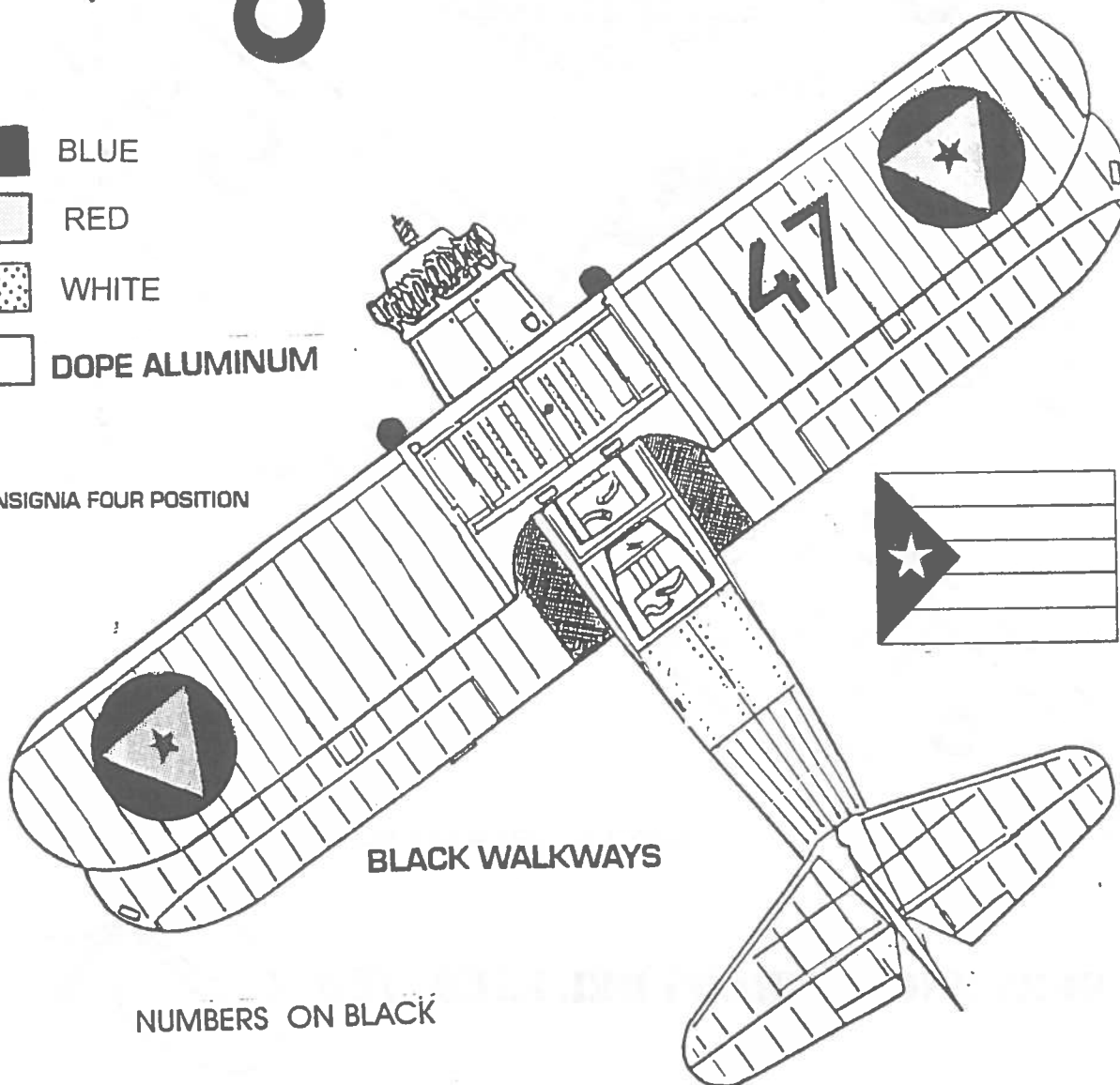


MARKINGS OPOSITE UNDER WING

White star

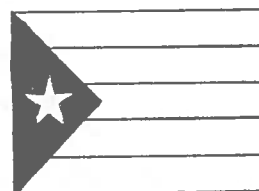
-  BLUE
-  RED
-  WHITE
-  DOPE ALUMINUM

INSIGNIA FOUR POSITION



BLACK WALKWAYS

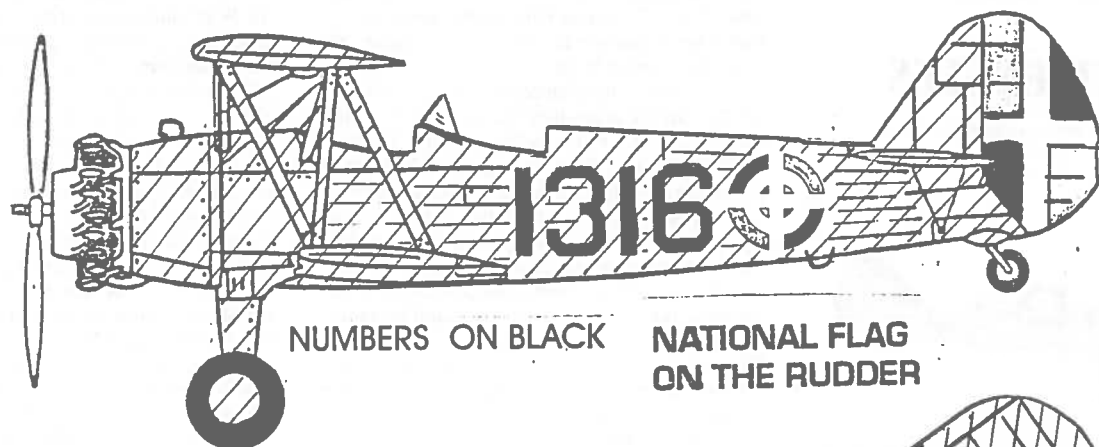
NUMBERS ON BLACK



CAP JORGE DELGADO P.
(SAFCH # 862)

Stearman PT-17

FUERZA AEREA DOMINICANA



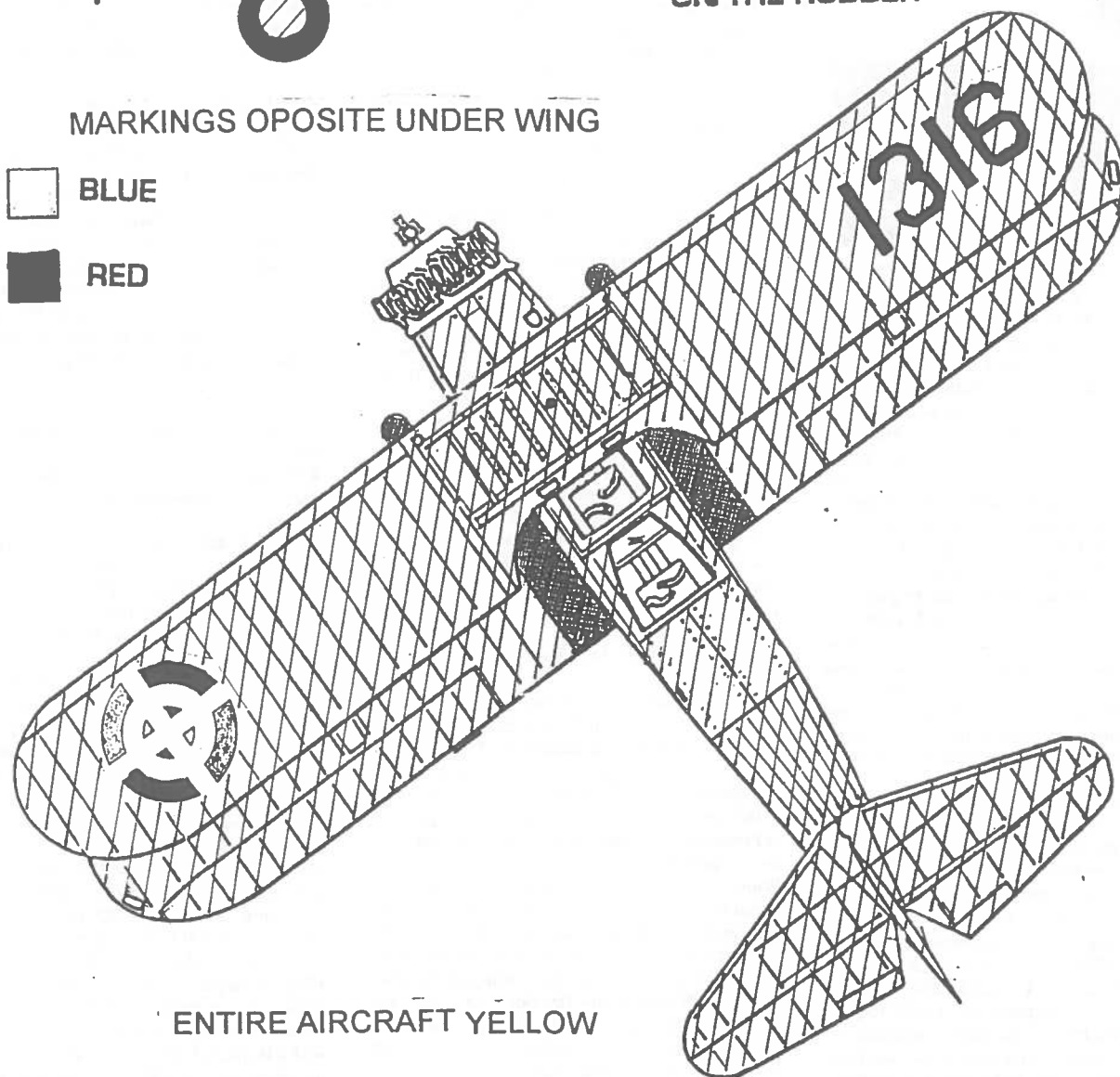
NUMBERS ON BLACK

NATIONAL FLAG
ON THE RUDDER

MARKINGS OPOSITE UNDER WING

 BLUE

 RED



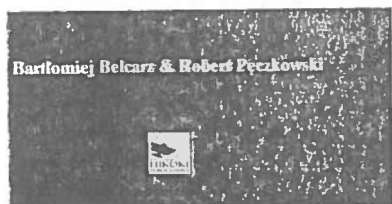
ENTIRE AIRCRAFT YELLOW

CAP JORGE DELGADO P.
(SAFCH # 862)

White Eagles, The Aircraft, Men and Operations of the Polish Air Force 1918-1939, Bartolomiej Belcarz and Robert Peczkowski. Hikoki Publications, Ashtree House, Station Road, Ottringham, East Yorkshire, HU12 0BJ, England. E-mail: hikoki@dircom.uk. Web: www.hikokiwarplanes.com. Hardback. A-4 size, 304 pages, 468 photos, 131 color side-view drawings, 10+ maps, and dozens of tables.

WHITE EAGLES

The Aircraft, Men and Operations of the Polish Air Force
1918-1939



Although I have more than six linear feet of shelf space devoted to the Polish Air Force, this book greatly increased my knowledge of the PAF in the prewar period and during the September Campaign. On almost every page I found information that I had searched for in vain in other English-language publications. For example, on page 61: "Airmen of 6 Eskadra claimed the first aerial kill of the Polish Air Force. On 24 February 1919, during air reconnaissance over Lwow, the crew of *sierz. pil.* Jozef Cagasek and observer *pchor. obs.* Stanislaw Pietruski, flying an Albatros C-XII with code no. 7 was attacked by a Ukrainian Nieuport. In a short combat *pchor.* Pietruski managed to hit the fuel tank of the Nieuport and the Ukrainian pilot was forced to land." And on page 80, "The Eskadra (14 Eskadra Wywiadowcza) was heavily engaged in the offensive that commenced in April (1920), flying many successful operations, including one on 14 April, when during an attack against an enemy airfield at Slawnoje the crew of *ppor.* Ziembinski and *kpr.* Dzierzgowski managed to shoot down a Bolshevik Nieuport."

Besides the Russo-Polish War, there is good coverage of combat operations of the PAF from 1920 to 1939: While the conflict between Poland and Lithuania over Wilno with PAF Breguet 14s in "Central Lithuanian" markings is fairly well known, unknown to this reviewer was the actions of the PAF against troop supporting *marsz.* Pilsudski's coup d'etat in 1926. Also covered are the PAF "show of force" against Lithuania and Czechoslovakia in March and September of 1938 respectively, as well as PAF unsuccessful attempts to intercept German and Soviet reconnaissance flight over Polish territory. About the Soviet incursions, the authors write, "...there is no written record of any contact with Polish interceptors." This is in contrast to other published accounts that a Soviet

reconnaissance aircraft was shot down in 1936(?). Operations during the September Campaign are covered in great detail by following each unit from mobilization on 24 August 1939 through evacuation to Romania. The presentation by unit, rather than chronologically, means that this chapter should be read a little at a time, not in one sitting. This will require patience, but will pay off in the end with a better understanding of the difficulties under which the PAF operated during the campaign. Polish naval aviation is covered in a separate 35-page chapter with 79 photos.

Between these action-packed chapters are chapters on the various peace-time reorganization of the PAF. In contrast to the highly readable "combat" chapters, these are hard reading mainly because of the authors insistence in using the Polish designation for all units. A 5-page list of the English equivalent of "Polish Military Terms" is included, but this reviewer would have found it much easier to get through these complicated events if, in the chapters, the Polish term was followed in parentheses by the English equivalent.

While the text is a joy in itself, for sheer impact the photos take center stage. About 50 per cent of the 468 photos are familiar to this reviewer, but all are reproduced with a clarity heretofore unseen. The sharpness of the photos of the early aircraft is especially noteworthy. Probably these were taken from original glass plates while we have become used to "copies of copies" in other publications. All photos are presented in large size, usually a page of 3 photos with informative captions.

The 131 color side-view drawings are very well done and are each supported with informative captions giving unit, date, and location (when known) as well as other useful information. All drawings are in constant 1/72 scale except the bombers (Gotha, Friedrichshafen, Farman, Zubr, Los, Latham, & LeO) which are in 1/96 scale. An interesting addition are drawings of Spitfire, Hurricane, Battle, and Z.506 in Polish markings which, while not supported by photographic evidence, the authors are reasonably sure that they received PAF markings. A map of Poland in 1918-1920 shows the front lines from the time of independence in November 1918, to the capture of Kiev in June 1920, and the extent of Western advance of the Bolsheviks in August 1920. (No wonder Churchill called the Battle of Warsaw one of the 10 most important battles of Western civilization.) The remaining 9 maps show the PAF bases in August 1939 and the location of PAF fighter units and the front lines on 1, 4, 6, 8, and 15 September 1939.

The appendices cover a variety of subjects including the number of aircraft and engines produced in Polish factories, specifications of bombs and machine guns used by the PAF, number of aircraft by type used by the PAF and naval aviation, losses of flying personnel in flying accidents, foreign flyers in Polish service, designation of Polish aircraft, and too many more to mention here.

White Eagles cannot be too highly recommended. If you're an aviation history buff or a modeler, but have little or nothing on the Polish Air Force, this is the next book you should buy. On the other hand, if you already have an extensive library on the PAF, you will still want to buy this book for it will take pride of place in your library. The color side-view drawings will keep the modeler interested in Polish aircraft busy for years to come.

Le CG 1/2 dan la campagne de France, Batailles Aeriennes #17. Sarl Lela Presse, 29 rue Paul Bert.

62230 Outreau, France. 290 F postage include for 4 issues (one year).

Having carried this series from the September Campaign in Poland up to the Battle of Moscow, the editors now return to a more detailed study of the Battle of France with the first of a multipart study of GC 1/2 of the Armee de l'Aire's famous "Cigognes" escadrille. The first chapter, "Origines et Traditions" covers the beginnings of the unit in the WWI and its activities between the wars; this section occupies only 5 pages including photos of their Nieuport 17, Span 13, NiD 62, & Dewoitine 501 (a total of 8 photos). The remaining chapters unfold as follows: (2) Chartres, Munich, les Morane et la mobilisation; 6 pages including 11 photos. (3) En guerre, drole et moins drole; 50 pages including 85 photos (most MS 405 and personnel. (4) 10 mai-25 juin: le campagne de France; 7 pages including 9 photos.

Color side-view drawings consist of 6 MS-406 and one He 111 and the "Fiches monographiques" cover the Morane-Saulnier MS-406 and Heinkel He 111 P et H. The 2-page "Uniformes" section contains 5 color drawings of "Le GC 1/2 et ses uniforme". Nothing here for the small-air-force enthusiast, but for the student of the Battle of France and the aficionado for the MS 406 - invaluable.

Enciclopedia de la Aviacion Militar Espanola, Quiron Ediciones, C/Cromo P.18-20, Poligono Industrial San Cristobal, 47012 Aviladolid, Spain.

The first sixteen parts of this "encyclopedia" of Spanish military aviation have been reviewed in previous issues of this column so there is no reason to repeat the praise for the excellently-reproduced photographs and the beautiful color side-view drawings. However, the Spanish language text continues to present a problem to the linguistically challenged. In the brief reviews that follow, a listing of the color side-view drawings should suffice to identify the contents. Also, the count of photographs will highlight the increasing number of color photos used to illustrate more recent aircraft.

#17 (16 pages) 22 b&w photos and one color photo. Color side-view drawings: Douglas TC-47B, Hispano HA-200 Saeta (2), CASA C.207 Azor, Hispano C-4K (Bf 109), CASA 2.111 (He 111) (3), Hispano HA-1112 (Bf 109), North American T-6D, Beechcraft T-34A, Douglas C-54, & CASA C-127 (Do 27). Inserted Posters: Polikarpov I-15bis & Savoia-Marchetti SM.79.

#18 (16 pages) 7 b&w and 9 color photos. Color side-view drawings (Grumman SUH-16B Albatros, Lockheed F-104G, De Havilland Canada DHC-4, CASA-Northrop F-5B, CASA_Northrop RF-5A, AMD Mirage IIIE, North American F-86F, Lockheed TF-104, Hispano Super Saeta, Mystere Falcon 20, & Canadair CL-215. Inserted posters: Savoia-Marchetti SM.81 & Northrop 1C Delta.

#19 (16 pages) 3 b&w and 16 color photos. Color side-view drawings: McDonnell Douglas F-4C Phantom, Beechcraft B.55 Baron, Lockheed C-130H, Beechcraft F.33C, CASA C-212 Aviocar (2), CASA 2.111 (He 111), North American T-6, Hispano Super Saeta (2), CASA C-127 (Do 27), Mirage F-1, & Northrop RF-5A. Inserted posters: Potez XV A2 & Bell AH-1 Cobra.

#20 (16 pages) 16 color photos. Color side-view drawings: Boeing KC-97L, CASA C-101. Mirage F-1E, McDonnell Douglas EF-18A, CN-235, & Eurofighter EF-200. Inserted posters: Junkers Ju 87-A Stuka & Curtiss JN-2 Hidro.

Issue #29 completes Volume I on the Spanish Air Force and its predecessors. Volume II goes back to 1917 and picks up on the story of the Aeronautica Naval.

#21 (10 pages) 17 b&w photos. Color side-view drawings: Avro 504L & Macchi M.18. Included posters: Airspeed Envoy A.S.6J (III) & Douglas TC-47B-30-DK.

#22 (16 pages) 23 b&w and 3 color photos. Color side-view drawings: Macchi M.24, Martinsyde F.4A, Savoia S.62 (3), Hawker Osprey, Macchi M.18, Dornier Wal, De Havilland DH.83 Fox Moth, Hispano E-30, Vickers Vildebeest, Cant Z.501, Heinkel He 60E, Fairchild 91 Baby Clipper, & Heinkel He 114A. Inserted posters: AISA I-115 Garrapata & Arado Ar 95 A-0.

#23 (16 pages) 2 b&w and 24 color photos. Color side-view drawings: Bell 47G, Sikorsky S-55, Augusta-Bell AB-204, Agusta-Bell AB-12 ASW, Cessna Citation II, & Sikorsky SH-3D. Inserted posters: Fieseler Fi 156 Storch & Bristol Boxkite.

#24 (16 pages) 7 b&w and 13 color photos. Color side-view drawings: Hughes 500M, Bell AH-1G, McDonnell Douglas TAV-8S, McDonnell Douglas AV-8S (2), McDonnell Douglas EAV-8B, Sikorsky SH-60B. The issue ends the presentation of Naval aviation and begins the presentation of Army Aviation: Cessna L-19A Bird Dog, Sikorsky SH-19D-4, & Bell 204. Inserted posters: Piper PA-23 Aztec & RWD 13 Polaca.

LeR 2, Keskinen & Stenman. Suomen Ilmavoimien Historia #17. Kari Stenman, Maininkitie 14 A, 02320 Espoo, Finland. E-mail: kari.stenman@kolumbus.fi. Web: kolumbus.fi/kari.stenman

Kari writes, "You probably remember that Kalevi Keskinen and I have been compiling books about the Finnish Air Force for over 30 years. With various problems with previous publisher, I have decided to buy top quality processing and printing services and publish the books by myself. As the first subject we have chosen LeR 2, the first Finnish fighter regiment, which claimed close to 600 aerial

victories. It is also our first pure unit history. The book is volume 17 in our main series and follows the lay-out already established a couple of decades ago."

The format and quality of the most recent addition to this outstanding series remain the same; short segments of text (in Finnish) within a multitude of photos with Finnish and English captions. As usual, the quality of the photos is excellent and their reproduction on high-quality glossy paper is superb. Anyone who has seen one of the other volumes in this series knows that, in both quality and contents, this series represents the best in aviation publications.

The main section of this volume, 113 pages out of the total of 144 pages, is devoted to 240 photos of aircraft and crew standing in front of aircraft. Aircraft types covered include: Fokker D.XXI, Bristol Bulldog, Gloster Gladiator, Fiat G.50, Morane Saulnier MS.406, Hawker Hurricane, Brewster Model 239, Westland Lysander, Fokker C.X, Polikarpov I-153, Messerschmitt Bf 109 G-2, Morko Morane, and Myrsky II. There are single photos of some interesting squadron "hacks" such as a Polikarpov U-2, Fokker F.VII, Pyry, and Saaski. The photo captions are a little disappointing, usually denoting only the unit, pilot and crew, location, and date; useful information, but it becomes repetitive after a while. Four pages of line drawings of the main types is seems unnecessary given the familiarity of the types depicted. The eight pages of color side-view drawings (32 side-views in all) provide a good selection of Finnish AF camouflage schemes during WWII.

The 8-page English summary describes in the form of a war diary the history of Lentorykmentti 2 from the beginning of the Winter War, through the Continuation War and the Lapland War, until the disbandment of the unit in 1952. This text contains many first-hand accounts and much information gathered from heretofore unattainable Russia archives. For the English reader, the least familiar of these events will be the Lapland War. As a provision of the 4 September 1944 cease fire, the Soviets demanded that the Finns drive the Germans out of northern Finland into Norway. During

this phase, six Brewsters claimed two Stukas (credited to BW-361 and BW-367) out of 12 encountered on 3 October. During this conflict, the FAF lost 4 Brewsters and one Fokker C.X, all to flak. A photo on page 107 shows Brewster BW-386 on 2 October 1944 still carrying the Finnish Hakaristi. The only difference in markings visible in the photo is that the Brewster carries its individual aircraft number on the fuselage in front of the national insignia instead of on the rudder. However, in the Squadron/Signal publication, "Finnish Air Force 1939-1945", the same authors state that during the operations against the Germans in northern Finland there were two fundamental changes in markings. "First the Finnish Air Force (FAF) removed the German required yellow 'Eastern Front' markings Second the FAF replaced their historic Hakaristi insignia with a round in the Finnish national colors" I would sure like to know what insignia to use before I build a Buffalo/Stuka dog-fight double.

The appendices list (a) Wartime Commanders (one page); (b) Aerial Victories (10 pages listing date, location, squadron & pilot, code of aircraft, type of plane shot down and its unit, and nature of confirmation); (c) a list of top scorers in the unit (15 pilots with 10 or more victories); (d) Operational losses (one page listing date, code of plane lost, squadron and pilot, circumstances); (e) Serviceable Warplanes 1940-1944 (one page listing the number of each type of aircraft on strength by unit at the beginning of each quarter from January 1940 to October 1944).

As with all books by these authors, LeR 2 is highly recommended to anyone interested in WWII in general or the Finnish AF in particular. The book is available directly from the author at the address above. Payment by credit card (Visa, Eurocard or Mastercard). The book retails in Finland at Finn Marks 189,00 equal to 31.90 Euros. The handling and postage in economy class to USA is another 36.00 Finn marks or 6.00 Euros. [Editor: As of the date this review the Euro is worth US\$ 0.906.]

-magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-

YASIG, The Bulletin of the Yugoslav Aviation Special Interest Group. US\$ 20 per year (4 issues, two double issues, or one yearbook). Nenad Mikusev, Novosadskog Sajma 16/301, 21000 Novi Sad, Yugoslavia. E-mail: vasig@eunet.yu

YASIG's yearbook for 2000 consists of 40 A4-size pages packed cover to cover with excellent drawings of Yugoslav aircraft, both pre- and post-WWII. All text is in both the Yugoslav and English languages.

This issue begins with 6-pages on the Royal Yugoslav Air Force (RYAF) Potez XV including 4 pages of illustrations (a 5-view drawing, 3 side-views, sketches of the interior, and enlarged views of the machine guns, machine-gun mount, propeller, and radiator). Two pages follow on the Savoia Marchetti S.79K in RYAF markings including 2 side-view drawings and views of the upper surface of the wings. Next, the Yugoslav Buckler Bu 133D-1 Jungmeister is covered in 2 pages with multi-view drawings of pre- and post-WWII color schemes. The Lockheed 10A Electra service with the pre-war airline Aeroput is described in 2 pages including a 2-view drawing of 'YU-SAZ'. Three pages cover

B-24J Liberator 42-73085 in RYAF markings at Bolling Field in November 1943. (The RYAF didn't use B-24s, but this is a true story.) Two Yak-9Ps of the Acro aerobatic team, one overall red and the other overall yellow, are covered in 2 pages including 2 side-view drawings. The first Yugoslav jet plane, the twin-engine Ikarus 451M, is covered in 2 pages with a 1/72-scale 6-view drawing and 2 side-view drawings. Three pages of drawings illustrate the UTVA 75A (port and starboard side views) and UTVA 75 (a 4-view drawing). The Gates Learjet 254B is illustrated with 3 different color schemes on 3 pages. The Cessna 441 Conquest II is illustrated on 2 pages: 'YU-BMG' and Slovenian 'SS-CAE'. Five pages are devoted to a description and drawings of USAF OA-10A Thunderbolt II, 81-0967, reported to have been hit by a SA-7 man-portable SAM near Skopje, Macedonia; 2 pages of photo show the OA-10 under repair and "OA-10A parts collected around the Kosovo region and displayed at the Yugoslav Aviation Museum". A 2-page table lists "Yugoslav aircraft taken as war-booty by Germany up to May 20, 1941". Three pages are devoted to "Yugoslav

Aviation Colours", one page each to "WWI & Serbian Aviation", "Royal Yugoslav Air Force", and "Partisan Aviation"; these tables include the name of the color, aircraft using the color, FS 595A equivalents, and closest-match model paint.

YASIG is an outstanding source of information for both the history enthusiast and modeler. With its well-researched articles and meticulously-documented drawings, it is a must for anyone interested in the small air forces.

[Editor: Nenad also produces resin kits under the Aeropoxy name. Included are the IK-3 in both 1/72 and 1/48 scale, and in 1/72 scale the Utva 75 (2 seater) and 75A (4 seater), and J-22 Orao ("with decals, stencils and die cut vinyl airbrushing masks"). He is now working on a reissue of the IK-2 in 1/72 scale and several new kits including the Ikarus 451M [A particular favorite of your editor.] and Fizzir FN biplane both in 1/72 scale. These kits can be seen at Nenad's website: www.aeropoxy.freeservers.com.]

Savoia-Marchetti SM.75bis. 1/72-scale vacuform kit with injection-molded parts. Broplan MS-77. Broplan, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

The SM.75 was one of the best looking of the Italian trimotor transport used during WWII, and the Broplan vacuform kit of the SM.75bis captures the elegant form of the aircraft quite nicely. The kit is molded on six 22 cm by 12 cm sheets of white styrene in the usual Broplan style with sharply delineated parts and finely engraved surface detail. To conform to the limitation of the molding machine, the fuselage is divided fore and aft into two parts. The joint is well designed and should provide little problem with alignment. This fuselage break will also allow of the production of other promised version of the SM.75 by replacing the rear section of the fuselage with vertical tail surfaces of different shapes. The wings butt join to the fuselage, but the sturdy spar provided will ensure proper dihedral and a strong joint while reducing stress on the fuselage-to-fuselage joint.

The smaller parts such as engines, cowlings, propellers, landing gear struts, etc. are provided on two small (10 cm by 9 cm) sprues of injection-molded parts. These sprues show a little more flash than other recent Broplan kits, but this should be nothing more than a nuisance. Cockpit detail, little of which can be seen through the small windows, consist of bulkhead, floor board, two 4-part pilot seats, two 2-part control columns, and an instrument panel. There is no detail in the cabin, but would be visible anyway. A vacuform sheet of clear plastic provides the cockpit and cabin windows and the dorsal turret.

The instruction sheet consists of drawings showing the location of the parts on the plastic sheets and sprues, an exploded-view construction diagram, and cross-sectional views of the cockpit and engine compartments. The back of the instruction sheet consists of an excellent 1/144-scale 3-view drawing of 'I-BETA' in a color scheme of Verde Olive Scuro (FS 34052) upper surfaces with Grigio Azzurro Chiaro (FS 36307) under surfaces as seen at Guidonia in 1943. No decals are included with the kit.

Broplan has provided another nice vacuform kit of an Italian aircraft that should not only appeal to the modeler of Italian aircraft but also to anyone wanting to add an elegant trimotor to a collection of transport aircraft. With a model wingspan of slight over 16 inches the SM.75bis should contrast nicely with a 1/72-scale Gooney Bird.

CWL WZ-X LD, 1/72 resin-cast kit #A23. Choroszy Modelbud, Czernichow 371, PL 32-070 Krakow, Poland. \$27.00 plus postage.

Although Choroszy Modelbud resin-cast kits have been reviewed by our Polish correspondent in previous issues of SAFO in his "News from Poland" articles, this is the first time I've seen these kits in the "flesh". These kits are the finest resin-cast kits I have every had the pleasure to review.

The CWL WZ-X was the first combat aircraft of domestic origin to be completed and flown in independent Poland. It is a small 2-seat reconnaissance biplane designed by the Centralne Warsztaty Lotnicze (Central Aviation Workshops) with the prototype first flying in August of 1926. Besides the prototype, three pre-production aircraft were built, two with 450 hp Lorraine-Dietrich water-cooled engine and the third powered by a 530 hp Bristol Jupiter air-cooled radial engine (see below). Despite excellent performance, production was not

ordered, most likely due to pressure from the French to build Potez biplanes under license. (Information from: Cynk, "Polish Aircraft 1893-1939").

The Modelbud kit has surface detail that is superior to most injection-molded kits and is surpassed by none. The representation of the rib detail on the wings is especially well done and the separation of the moveable surface is the most realist I have ever seen. The fuselage is cast in two parts, split vertically, with longerons, instrument boxes, and throttles cast into the inner surface of the cockpit area. Louvers, panel lines, and intakes on the engine cowlings are exquisite. Interior detail is very complete with a floorboard with molded on rudder pedals, two seats, bulkhead, and instrument panel; not much need for embellishment here. The one-piece port and starboard lower wings butt join to the fuselage with small nibs and location holes providing for accurate alignment, but you'll have to be sure the wings have no dihedral. The upper wing panels join to a center section and care will be needed to achieve the proper dihedral as indicated on the front-view diagram in the instructions. The locations of the wing struts are indicated by small flat square areas on the wings while those of the center section are recessed to accept the center-section struts. A great deal of experience with biplane kits will be required to get everything lined up perfectly. A bag full of small parts, too numerous to enumerate, contains the propeller, wheels, landing gear struts, radiators, etc. Another bag contains the parts for the observer's armament: gun ring, transverse arm, machine gun, and cartridge drum. No need to go to AeroClub, as long as you get the parts off the "benches" without breaking them.

The instruction sheet an exploded construction diagram and a 1/72-scale 3-view drawings similar to those shown in early instalments of "News from Poland". A small, but excellent, decals sheet provides the Polish chessboard national insignia and the numbers '9' to finish the aircraft shown in color on the top of the box.

The Modelbud kit of the CWL-X LD is an excellent resin-cast kit of a very obscure, but historically important, kit of the first Polish designed and built combat aircraft. It should appeal to anyone building a collection of Polish aircraft. However, experience in building resin-cast biplanes is highly recommended before attempting this kit.

CWL WZ-X Jupiter, 1/72 resin-cast kit #A24. Choroszy Modelbud, Czernichow 371, PL 32-070 Krakow, Poland. \$27.00 plus \$20 per kg postage. Payment by credit card or International Postal Money Order.

The history of this aircraft is described above. The kit is identical to the WZ-X LD except that the fuselage has been modified to accept the radial air-cooled Jupiter engine in place of the Lorraine-Dietrich water-cooled engine. The Jupiter engine, its frontal plate, and its big paddle-bladed, 4-blade propeller in an aircraft of significantly more pleasing appearance.

All the comments in the above review apply equally well to this kit. The casting is again superb and the excellent surface detail has to be seen to be believed. The decal sheet is the same as for the WZ-X LD, but as the color drawing on the box top indicated, the number '9' is not used. Again, this kit is not recommend for the beginner, but for the collector of Polish aircraft who has experience in building cast-resin biplanes.

PZL L-2, 1/72 resin-cast kit #A25. Choroszy Modelbud, Czernichow 371, PL 32-070 Krakow, Poland. \$27.00 plus \$20 per kg postage. Payment by credit card or International Postal Money Order.

The PZL L-2 is a parasol 2-seat monoplane that saw limited service with the Polish Air Force in VIP, courier, and liaison duties with the Eskadra and, later, as a trainer at Deblin. Its main claim to fame was the flight of 'SP-AFA' around Africa in 1931.

The Modelbud kit of the L-2 is a thing of beauty, ever better than the WZ-X's reviewed above. In particular, the one-piece wing is a masterpiece of resin casting. Interior details and other parts are as described above. Mounting the parasol wing and the landing gear struts will not be for the faint of heart. The decals sheet provides the Polish chessboard, 'evidence' number '55.10' and Eskadra emblem (a white square with green border and green 'I' in the center) for the fuselage, and the PZL emblem and 'L II' for the vertical tail. The 'evidence' number and the tail markings are in black, but the color drawing of the box top shows them in red. (Which is the correct color?)

The PZL L-2 is another excellent kit from Modelbud and is probably the best choice for the modeler with limited experience with cast-resin kits.

Lublin R.VIII HS, 1/72 resin-cast kit #B253. Choroszy Modelbud, Czernichow 371, PL 32-070 Krakow, Poland. \$35.00 plus \$20 per kg postage. Payment by credit card or International Postal Money Order.

"In 1926 Plage-Laskiewicz works were awarded contract for designing and production of new combat aircraft of reconnaissance/bomber role which could be used on unprepared airfields. The designing works started immediately and were performed by designing team lead by Jerzy Rudlicki. First prototype R-VIII/I was ready in February 1928. ... Four R-VIIA were built in 1929 on which one was equipped with Lorraine-Dietrich 650/760 hp engine and three were Hispano-Suiza 650/740 hp powered. ... No further orders were placed by Department of Aeronautics and the existing aircraft were soon taken over by the Polish navy." (Notes for the Modelbud instruction sheet.)

The R.VIII makes into a rather large 1/72-scale model with a wingspan of 23 cm (9 inch). Kit B25 is for the Hispano-Suiza powered version with wheeled undercarriage. Again, the parts are representative of the best in the resin-casting art. The wings will go together easily since there is no dihedral to worry about and the mounting studs should ensure a sturdy join to the fuselage and center section. The location of the struts on the wings are indicated by holes which upon a little deepening with a drill should allow correction positioning. However, a jig, and experience, is suggested to insure proper alignment. The complicated center-section struts and landing-gear assembly should prove challenging.

The large size of the model requires 4 pages of instructions; two for the 1/72-scale drawings and two for the exploded construction views.

The decal sheet is obviously designed for the both the land-plane and float-plane versions shown in the Modelbud catalog. This color drawing on the box top shows the HS-powered land-plane with upper surfaces in 'olive-green' and lower surfaces in 'blue'. The unit emblem consists of a blue ram-paging elephant within a white disk. The Polish chessboard insignia are provided as are red 'Lublin R.VIII' and red 'N 2' and 'N 4'. There is no indication of which number goes with this aircraft, so

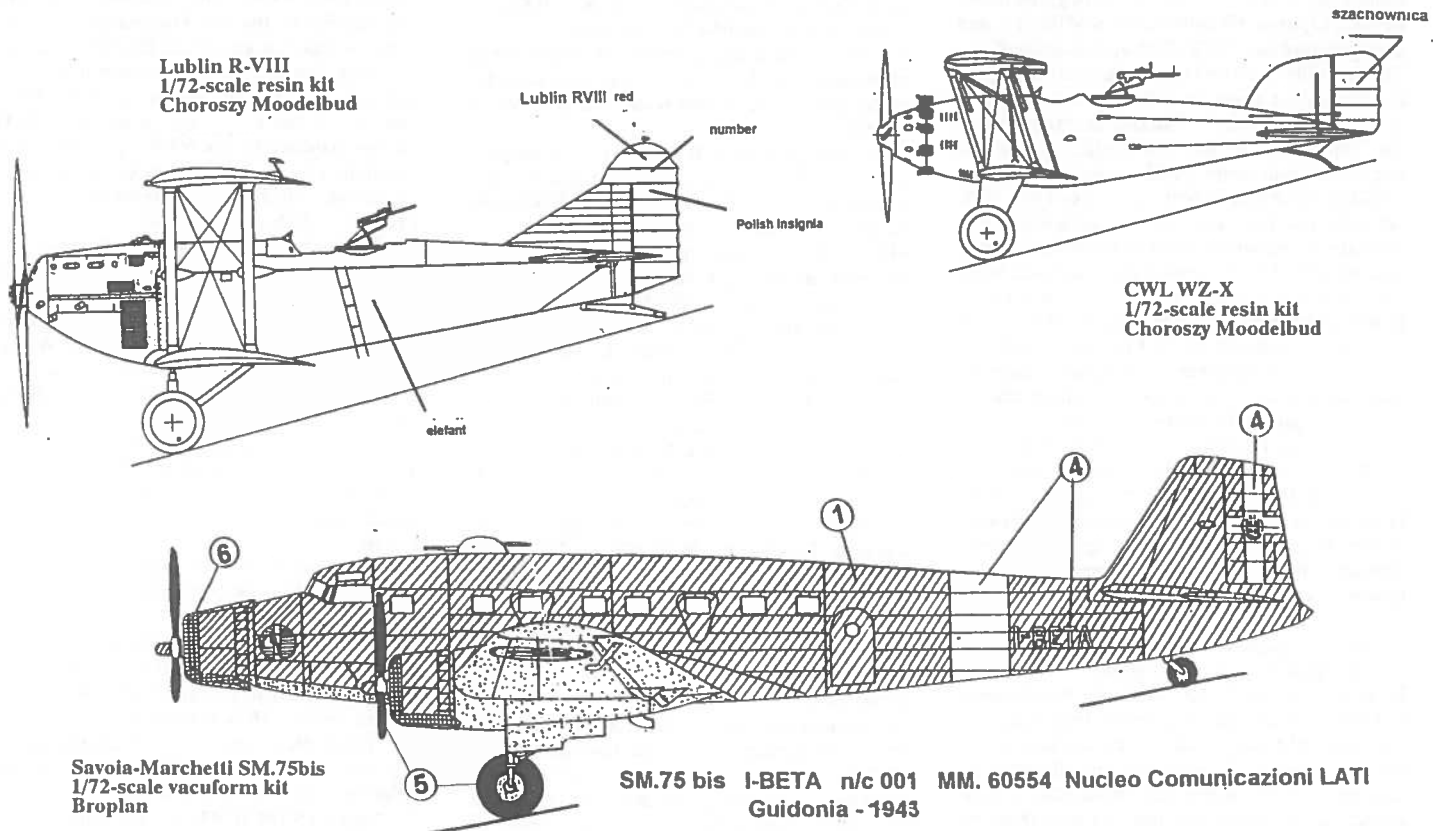
other references will have to be consulted.

The Modelbud kit of the Lublin R VIII HS will make into an excellent model for any modeler with experience in putting together resin-cast kits and with the skill and patience to properly align the wings and landing gear.

Lublin R VIII LD, 1/72 resin-cast kit #B26. Chorosz Modelbud, Czernichow 371, PL 32-070 Krakow, Poland. \$35.00 plus \$20 per kg postage. Payment by credit card or International Postal Money Order.

This kit is identical to the R VIII HS reviewed above except for the installation of the Lorraine-

Dietrich power plant. Even the decal sheet is the same. However, the color painting on the cover shows a aircraft in overall silver but still with the 'elephant' emblem.



-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-decals-

"Millennium MiGs" Upgraded and Late Service MiG-21s. 1/48-scale decals. LHD 48004. Linden Hill Decals, Linden Hill Ltd., P.O. Box 543, Crugers, NY 10521, USA. E-mail contact@linden-hillimports.com. \$10.99.

The last few issues from Linden Hill Imports, while well researched and brilliantly presented, have had little of direct interest for the small-air-force enthusiasts because of their concentration on aircraft in Soviet/Russian markings. Their latest releases, "Millennium MiGs" and "21st Century Shturmoviks" (see below), more than make up for this. While the MiG sheet starts off with two USSR MiG-21 and a Russian MiG-21UM, things really get exciting with three Bulgarian MiG-21s and four Romanian 'Lancers' - all with post-communist roundels. Then there's a Chengda J-7III of the PLAAF (P.R. China). Finally, the piece de resistance, a Georgian Air Force MiG-21UM.

The decal sheet itself is up to the usual Linden Hill quality: 14 cm 21 cm, with all items in perfect register and dense vibrant colors. All codes numbers and unit insignia are provided and there are sufficient national insignia for one of each of the countries represented. The 5-page instruction booklet consists of detailed history of the individual aircraft and color side-, top-, and bottom-view drawings of each aircraft showing the placement of the decals and the pattern of the camouflage scheme. (A full-color presentation of the instruction sheet is found on their web page: www.lindenhillimports.com)

The following is an example of the historical information: "MiG-21UM 'Red 27' Georgian Air Force. One of two UMs originally manufactured at Tbilisi at State Aircraft Factory 31 (from a total of over 1,100) and retained by the Georgian Air Force. Red 27 is currently undergoing an upgrade and will be based at Tbilisi-Marneuli AB to be used as an interceptor by the Air Force. Photographed in 2000 sporting once again the standard VVS camouflage as stated above but heavily weathered. The Tan in particular has taken on a pinkish hue."

The three Bulgarian MiGs, all with different camouflage schemes, are MiG-21UM 'White 34' in 1997, MiG-21bis 'White 90' in 1997, and MiG-21bis SAU 'White 345' in 2000. The four Romanian MiGs consist of an all-grey MiG-21MF 'Red 901' in 1995 and three camouflaged MiG-21 Lancers, 'Black 810' in 2001, 'Black 9501' in 2000 (a 2-seat Lancer B with large 'Fortelle Aeriene Romane' inscriptions on the fuselage), and a 2-tone grey over light-blue scheme 'Black 6607' in 2000.

This decal sheet should set all small-air-forces enthusiast's pulses racing.

A 1/72-scale sheet (LHD 72004) is available at the same price and includes one additional Romanian scheme. The same subjects are also available 1/32-scale in a two-sheet set.

21st Century Shturmoviks, Russian and International Su-25s, 1/72-scale decals. LHD 72003. Linden Hill Decals, Linden Hill Ltd., P.O. Box 543, Crugers, NY 10521, USA. E-mail contact@linden-

hillimports.com. \$10.99.

If the above-described MiG-21 sheet "blew your socks off", then be prepared for another pleasant surprise. Their Su-25 sheet includes markings for three Russian, one Bulgarian, two Georgian, one Ukrainian, two Peruvian, and (hold on to your hat) a Turkmenistani aircraft.

The decals are in the usual excellent Linden Hill style: one 13.5 cm by 20.5 cm sheet in perfect register printed in dense, vibrant colors. All code numbers and unit insignia are provided for each aircraft and sufficient national insignia are given to model one aircraft for each nationality. The 4-page instruction sheet includes detailed description of each individual aircraft's history and color scheme (with FS 595 equivalents), a list of references, and a list of Su-25 accessories available from Linden Hill. Each aircraft is illustrated in color with port-side view and upper and lower surfaces of the port wing.

Non-Russian aircraft represented are: (1) Su-25K '249' Bulgarian Air Force, 1st Squadron, 22nd IBAP, Bezmer AB, Bulgarian, 1999. (2) Su-25 'Red 16' Georgian Air force, Marneuli AB, Republic of Georgia, Autumn 2000. (3) Su-25UB 'Red 21', Georgian Air Force, Marneuli AB, Republic of Georgia, Autumn 2000. (4) Su-25 'Red 10', Ukrainian Navy, 299th ShAP. Saki AB, Crimea, Ukraine, 1995. (5) Su-25 '074', Fuerza Aerea del Peru, Grupo Aereo 11, Vitor AB, Arequipa, Peru, 2001. (6) Su-25UB '080', Fuerza Aerea del Peru, Grupo Aereo 11, Vitor AB, Arequipa, Peru, 2001. (7)

Su-25K 'Red 02', Turkmen Air Force, Ak-Tepe AB, Turkmenistan, 1999.

All these aircraft are camouflaged in one of the two standard Russian schemes except the Ukrainian one which is in a unique overall light blue-grey ("most probably FS-35526 approximate") and the two Peruvian ones which are in a "unique camouflage scheme of two-tone dark green upper surfaces (approx. FS 34079 and FS 34108?) ... and dark grey (approx. FS 36176?) undersurfaces".

The description of the Turkmen aircraft highlights the meticulous research (and candor) that goes into Linden Hill Decals: "Turkmenistan contracted the Tbilisi Aviation State Association (TASA) to upgrade its late series Su-25s inherited from the USSR and received its first batch of 6 in late 1999. Although photos of Turkmen aircraft are currently very rare, it is apparent that the camouflage scheme is identical to TASA's newly upgraded Su-25 Scorpion prototype. [Editor: a color photo of a Georgian Scorpion appeared in the August 2001 issue of the Italian magazine JP-4.] Correspondingly the colours in our profile are in retrospect a little too dark. An educated guess at the camouflage scheme would be light sand (approx. FS 32648) and mid-green (approx. FS 34187) over light blue-grey (FS 35526) We believe that the Turkmen insignia is 'handed' on the tail, with the crescent to the rear. However, the direction of the upper and lower wing surface insignia remains something of a mystery, although it is our hypothesis that they are all 'right-handed' (i.e. crescent to the right)." Color views of the instruction sheet for these decals are available on there web page. These same markings are available in 1/48 scale at the same price.

In my opinion, the MAX Decals for the Alouette and Magister are the only decals that equal the usefulness of these decals for the modeler of the aircraft of the small air forces. SAFCH member Guy Holroyd of Linden Hill writes that "I have already had a tremendous reaction to both of my recent two releases (MiG-21s and Su-25s). As you know, both feature a number of smaller air forces. Given the positive response, I'm preparing some related new releases for 2001." My recommenda-

tion is to make out a check to Linden Hill Decals, and run, do not walk, to your nearest mail box.

Royal Yugoslav Army Air Force, Sheets Nos.1 & 2, 1/72 & 1/48 scale, Lift Here Decals. E-mail address: lifthere@eunet.yu

These decal sheets are very good news for all those of us who have to date had to make do with Kosovo Cross roundels gleaned from various sources, and scratch around in the spares box as well as cut up plain sheet to make codes, serial numbers and tail markings for 1/72 or 1/48 scale models of VVKJ aircraft.

Sheet No.1 provides, in 1/72 scale, 12 Kosovo Cross roundels of four different sizes (and with the crosses correctly outlined in dark blue, not black), serial number, codes in white and black!, tail 'flags', etc. which suffice to decal models of at least three different aircraft, e.g. a Me-109E-3, Hurricane and Fi-156. The instruction sheet, based on a set of 1/144 scale drawings, covers seven aircraft: Messerschmitt Me-109E-3 'White 8', Spring 1940 (RLM 70/65 camouflage); Messerschmitt Me-109E-3 'Black L-52', Summer 1940 (RLM 70/65 camouflage); Hurricane Mk 1, 'White VI' 2306, Spring 1940 (RAF Dark Earth/Dark Green/Silver); Hurricane Mk 1, BR.2308, Spring 1941 (RLM 70/65 camouflage); Messerschmitt Me-108B-1, 'Black/White S-02', Summer 1940 (RLM 71/65 scheme); Fieseler Fi-156C1, 'White 20', Spring 1940 (RLM 71/65 camouflage); Avro 671/Cierva C.30A, in 1939 (overall Silver).

The colour schemes and markings for the two Me-109E-3s are those shown in the excellent drawings by Ognjan Petrovic in *Aeroplan* 2/90 and 6/89 respectively.

The markings for the two Hurricanes call for comment. The Roman 'VI' for the fuselage code of BR.2306 is white, which may well be right although it was previously thought to have been yellow, but the undersurfaces of the aircraft are shown painted Silver, not Night and White or Night/White/Silver as must surely have been the case. Similarly, the fin markings "Hoker Hurikan BR.2308" (in Cyrillic letters) for the other Hurricane are also white,

which need not be wrong although, according to Sime Ostric and Ognjan Petrovic (*Aeroplan* 2/90), the Hurricane captured by the Italians had "Hoker Hurikan BR.2337" painted in yellow on the fin. The RLM 70/65 camouflage scheme for BR.2308 is one that was first mentioned by Sime Ostric about 20 years ago as having been applied to some Hurricanes early in 1941. Other authors say the scheme was applied to the last Hurricanes to leave the Zmaj Works, but a photo of BR.2347, the last but one licence-built Hurricane, proves it wore three-colour upper surface camouflage. Since BR.2308 was one of the first batch of British-built Hurricanes acquired by the VVKJ, perhaps the dark green/light blue scheme was applied only to some of the older aircraft that underwent overhaul just prior to, or early in, April 1941.

The RLM 71/65 colour scheme and markings for a Fieseler Fi-151C are those documented by a photo and caption in *Aeroplan* 2/95.

Several colour schemes and markings for Messerschmitt Me-108B-1s are shown in *Aeroplan* 5/89. In addition to the RLM 71/65 scheme for S-02 chosen by Lift Here Decals, these include RLM 70/65 for S-03 and dark green/chocolate brown/ochre over sea grey for S-07.

Sheet No.2 provides decals in 1/48 scale for a Messerschmitt Me-109E-3, a Hurricane wearing regular upper surface camouflage, and a Fieseler Fi-156.

Lift Here Decals have also released a Yugoslav Air Force Sheet No.1, in 1/72 scale, with markings for a F-86D, F-86E, F-84G and T-33.

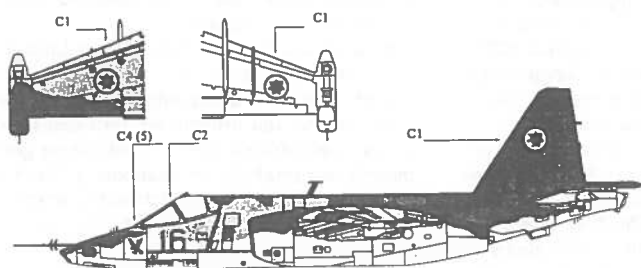
Given the obvious quality of Sheet No.1 for VVKJ aircraft, all that remains is to look forward to further decal sheets, in 1/72 and 1/48 scale, with markings for an IK-2, IK-3, Hawker Fury II, Bucker Bu 131, Potez 25, Breguet Bre 19, Blenheim I and Caproni Ca 311, all of which have been kitted in polystyrene or resin, if not in both scales.

Sid Napier (SAFCH #1521), Burgstrasse 2, CH-4107 Ettingen, Switzerland.

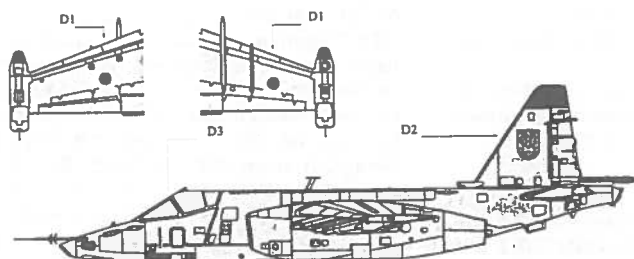


LINDEN HILL DECALS

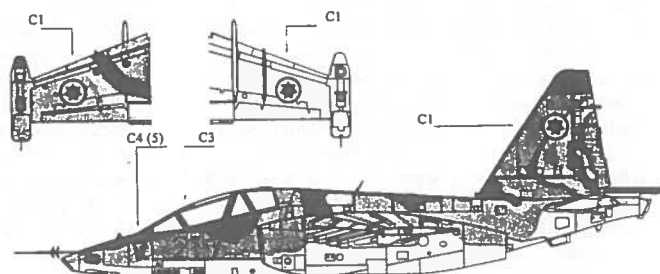
Georgian Air Force. Marneuli AB, Republic of Georgia, Autumn 2000.



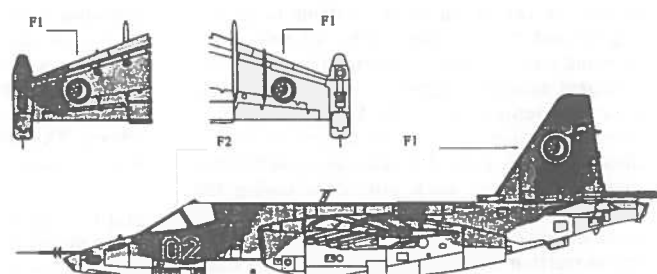
Ukrainian Navy. 299th ShAP, Saki AB, Crimea, Ukraine, 1995.



Georgian Air Force. Marneuli AB, Republic of Georgia, Autumn 2000.



Turkmen Air Force. Ak-Tepe AB, Turkmenistan, 1999.



"In reference to Roberto Vargas' article on the Short Skyvan in the Mexican Air Force, I would like to add the following information: The Mexican Skyvans did not use the four-digit numbers during all their service life; for example, Skyvan SH-1946 carried the Mexican AF number TP-214 and SH-1950 had Mexican AF number TP-215. Also it has been reported that other Skyvans carried the following numbers and civil registrations: TP-210/XC-UTI; TP-211/XC-UTJ; and TP-212/XC-UTK (SH-1952) reported as ex TP-216.

"I have documents from the Estado Mayor Presidencial that show the Skyvans switched Mexican Aircraft serial numbers as follows: TP-0213 to TP-210 August 1984 XC-UTI; TP-0215 to TP-211 August 1984 XC-UTJ; TP-0216 to TP-212 August 1984 XC-UTK; TP-0217 to TP-213 (accident in Chiapas) XC-UTL; XC-BOD to TP-214 XC-UTN; XC-BOT to TP-215 XC-UTM. Another document in my archives shows that TP-214 and 215 were received from the "Centro de Est. Econ Soc. 3er.M" on August 27, 1979.

"Some of the Skyvans were later transferred to the TAF with the following dates: SH-1951 XC-UTJ 13 August 1984; SH-1952 XC-UTK 13 August 1984; 100-58 SH-1920 XC-UTL 4 February 1985. The following Skyvans were still at the Estado Mayor Presidencial: 100-58 SH-1946 XC-UTM; 100-58 SH-1950 XC-UTN.

"I saw TP-214 (March 28, 1993) and TP-215 (June 15, 1993). By this time they had discarded the '0' number. I took plenty of photos of these Skyvans at Brown Field, near the Mexican border.

"I would like to add that Skyvan XC-UTQ/TP-214

was lost in an accident on 23 July 1998 near Pico de Orizaba, in the state of Veracruz. The aircraft was on a flight to Tuxtla Gutierrez, Chiapas, carrying cargo, with its two pilots and six passengers, all reportedly killed in the crash. However, other sources say there were only four persons on board." Santiago A. Flores, SAFCH #588, 2047-A Cerrissa Ct., San Diego, CA 92154-1275, USA. E-mail: floresbgkiddo@earthlink.net

[Ed: The following article comes from a Hong Kong newspaper dated 10 April 1941. It should caution us all to beware of the proclamations of 'experts'.]

"The Japanese have not one home-built warplane that could stand up for three minutes to a frontline equivalent form the United States, Britain, Germany, Italy or Russia, in the opinion of Captain H. C. Baird, British air ace.

"Captain Baird who has made a study of the growth of air power in the leading countries for the last 30 years, said that the best of the Japanese planes is only 'half-breed'.

"The Aichi flying boat is claimed by the Japanese Press to be able to blot out anyone who offers opposition to the 'New Order' in Eastern Asia. The Aichi is Japanese-built, but powered with French Lorraines which are good of their kind but would look like yesterday's beer against the British Sunderlands or the American Curtiss-Wright flying boats.

"The Kawanishi 94's are also powered with Lorraines. They are good stuff for war in China, but cannot work against the front-line deck-fighters, eight-gun landplanes or 'Chicago piano' arma-

ments of big power battleships.

"The Mitsubishi Co. of Tokyo builds fighters, bombers, deck-fighters, trainers -- every sort of warplane. It constructs under a number of British and American licences; but naturally the licences for the No. 1 defence machines do not go abroad; exportable licences are superseded before they are sent east. Japan has managed to import an altogether surprising quantity of British, American, German, French, Italian and other warplanes.

"It is not for me to tell the political Mongols their jobs, but figures don't lie and there is indisputable evidence of millions of dollars' worth of aircraft going to Japan every year from countries that may one day find these aircraft coming back with bombs aboard. They will probably be shot down because they are semi-obsolete types.

"The Nakajima fighter is about the only Japanese-built and powered machine that comes into the modern war picture. It is not a Spitfire, a Lockheed-Allison or a Curtiss Hawk, but no doubt it could put up a show against certain other types. But I believe not very many Nakajimas have been produced.

"As to pilots, the Japanese does not take kindly to machinery. He is industrious, keen, as fond of his copybook as a German, but without the German's pilot's dogged courage or the British or American flyer's daredevil inspiration.

The war in China has shown that Japanese airmen can fly well or fight well, but they cannot do the two things at the same time. They fall down even before the ancient Chinese warplanes lifted off the scrapheaps of half the world."

-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-

"I'm working on two books, one a volume on the Russian Military Air Fleet 1910-1917 (WW I), another a volume on the 1914-1917 lists of Russian aerial 'victories' and losses (from all causes), which includes a list of those airmen awarded the Order of St. George and the St. George Cross, with details of the event for which it was given. Hoping to have this two volume set done within about twelve months. No publisher yet in hand.

"Then I have a series of other projects in various stages of development. These will unfold as a series of monographs in the form of military/aviation chronologies devoted to the 'Forgotten Fronts' during the Russian Civil War (RCW) and Allied Intervention 1918-1920. They include the Red Air Fleet 1918-1922; the various White Air Fleets in North Russia - Miller; in Urals/Siberia - Kolchak (with Czech Legion); in South Russia Denikin-Wrangel; in Baltic region - Yudenich 1918 - 1920, in Wars of Independence Finland, Estonia, Latvia, Lithuania, Poland and Ukraine; in the Polish-Soviet War 1919-1920; the RAF in the Baltic, North and South Russia 1918-1919; and Armored Fighting Vehicles in the RCW. I'm hoping that the first of these will also be ready to go in about twelve months. Then others in the series over time when and if there is a market to be found.

"This brings up the question of my eventual need for aviation art work 1914-1922 of various types. These include what I call 'aviation art,' well painted scenes of aircraft in the air or on the ground (or water), that really catches the old eyeball. At least my old eyeball. I would have to include Mike O'Neal (I've already spoken with him) and Merv Corning (is he still around?) on my list. My problem is that I don't have a good contact list for any of my

needs. I know I will also have a need for color profiles, like those done by Bob Pearson and a few others in his class. Aircraft types will include British, French, Russian, German, Austro-Hungarian and Italian. I have good color reference material on all markings that might be involved in any given scenario.

"I know I will need paintings/water-colors of uniforms (with people in them), and airman badges, medals and orders (all Russian and have good reference material).

"Not sure at this time if I will have a need for 3-view black and whites. But one never knows does one?"

"I would very much appreciate your help in letting your readers know of my projects and that I'm seeking samples of work by artists who may have an interest in the above subjects and period. I'd also like to know what they charge for their work. I would much prefer that all contact be made by regular postal service."

August G. Blume (SAFCH #), 2511 Kerry Lane, Charlottesville, VA. 22901, USA.

"I just finished plans for a radio-control Polikarpov R-5 seaplane a couple weeks ago. My Dutch Fokker C-XI and Polikarpov matching in scale and same era and have the Czech Letov 328 seaplane all ready to go on the drafting table as time permits. Now, I was looking on World Wide Web for information on the Nardi 333 seaplane as it is the kind of the oddball type I love to draw for R/C giant scale. I would like to purchase a set of three views in 1/72 or larger scale. Anything smaller is difficult for me to work from.

"After the Czech Letov, I might try to get my beloved Bellanca Airbus drawn up. I drew it the

first time when I was in high school back in 1946. I had simple three views from an old Cleveland Model Making Magazine from the 30's. At that time I was buying back issues and picking up Air Trails for a dime at the hobby shop."

Gene Falada (SAFCH #1565), 22W070 Byron Ave., Addison, IL 60101, USA. E-mail: geneplans@aol.com

"This note is to correct my 'want' notice in SAFO #98. On the basis of information received from South America, the flying I seek information on is Herbert Kukurs of Latvia (not a Romanian named Sukrus). He was a celebrated pre-war WWII flier, who served in WWII, and later became famous in postwar Latin American."

Gary Kuhn (SAFCH #257), 23-D Crusader Ave. East, West St. Paul, MN 55118-4456, USA. E-mail: ggkuhn@earthlink.net

"The next set of decals from HI-DECAL will have markings for F-86D Sabre Dog in USAF and Yugoslav AF service. I am planning for more sheets for the Sabre Dog with markings for the Philippine, Thai, Taiwanese, and Hellenic AF. I know the Greek Dogs had a very interesting SEA-type camouflage and I've tried to contact Greek modelers and a modeling magazine in Greece, but without response. Perhaps SAFO readers could help me with references about the Greek AF schemes. Maybe somebody also has information concerning similarly camouflaged South Korean and Taiwanese F-85Ds."

Pawel Diego Rogoz (SAFCH #), Winkelweg 21, D-21218 Seevetal, Germany. E-mail: hi-decal@ad-dcom.de

